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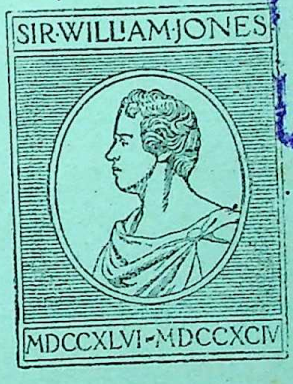

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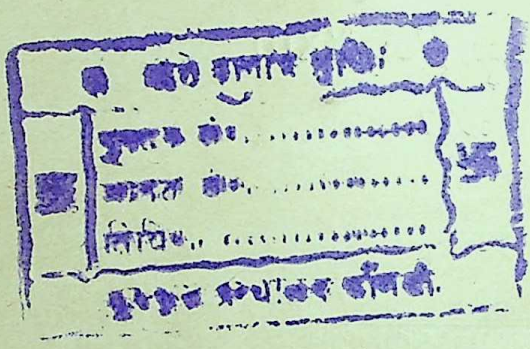

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गुरुकुल कांगड़ी विश्वविद्यालय हरिद्वार

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South Indian Aphididae.

By C. J. GEORGE, M.A.

(Communicated by Dr. B. Prashad.)

INTRODUCTION.

Among groups of insects of economic importance, Aphids occupy no mean rank. On account of the enormously large numbers in which these plant lice make their appearance whenever the weather happens to be conducive to their increase, they are always to be dreaded as enemies of plant life. For devising proper methods of dealing with any insect pest, a correct determination of its exact place in the scheme of nature and a study of its biology and habits are necessary preliminaries; for instance, the group of Aphids comprises forms of diverse and peculiar habits and the same species may attack various kinds of plants, and it is, therefore, necessary for the economic entomologist to have a fair knowledge of the classification of the group, as a first step towards devising control measures. Since there is at present a great deal of confusion in matters of taxonomy connected with this group, an intensive study of the species inhabiting particular regions is a necessity. So far, the late Lala Bashambar Das was the only worker who had undertaken a serious study of this group in India, and had Providence allowed him a longer lease of life this group might have received a thorough and masterly handling at his hands. The present paper forms the result of a preliminary investigation conducted on the aforesaid lines on South Indian Aphids with special reference to Coimbatore species.

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Macrosiphum solidaginis, Fabr.

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 164 (1918).
Host. *Carthamus tinctorius.* Collected from the Ceded Districts.

One of the biggest Aphids in South India. This seems to be a serious pest of Safflower in the Ceded Districts in January.

Macrosiphum sanborni, Gillette.

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 163 (1918).
Gillette, *Can. Ent.* Vol. L., p. 65 (1908).
Gillette, *Jour. Eco. Ent.* Vol. IV, p. 385 (1911).
Takahashi, *Aph. Formosa.* Part. II, p. 77 (1923).
Host. Cultivated Chrysanthemum and *Vernonia sp.* Collected at Coimbatore.

A black insect generally bad on Chrysanthemums from December to January. A few apterous forms were collected in October on a species of *Vernonia.*

Macrosiphum rosaeformis, Das.

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, (1918).
Host. Rose. Collected from Coimbatore and the Nilgiris.

All through the year it seems to be a pest of roses, but seldom becomes serious.

Myzus persicae, Sulz.

[Syn. *Rhophalosiphum danthii* (Sacchr).]
Gillette, *Jour. Eco. Ent.* Vol. I, p. 359 (1908).
Buckton, *Ind. Mus. Notes.* Vol. IV, No. 4, p. 197. (1900).
Host. All the local Cruciferous plants and tobacco. Collected from Coimbatore and Bangalore.

It is a serious pest of tobacco in the whole of Coimbatore District. It is distinguished by its reddish pink colour from other species of Aphids that attack tobacco. It lives on wild species of *Cleome* where there are no tobacco plants in the field.

Pentalonia nigronervosa, Coq.

Coquerel, *Ann. Ent. Soc. France.* Ser. 3, Vol. 7, p. 259 (1859).
Host. *Musa sapientum*—Collected from Coimbatore and Bangalore.

The genus *Pentalonia* is distinguished by the wing venation. The radial sector extends abruptly downward and meeting

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the upper branch of the media, fuses with it and is diverted again towards the tip of the wing. A closed cell is thus formed by the radial sector and the media. The hind wings are very much reduced there being only one vein.

This occurs throughout the year on all varieties of cultivated plantains.

Pentalonia galadii, V. D. Goot.

HOST. Cultivated *Colocasia* : Collected at Peermade, 4,000 ft. Travancore.

This species resembles *Pentalonia nigronervosa* to a great extent. It is prevalent in that locality from August to October. It is found on the inner side of the leaf sheaths.

Rhophalosiphum pseudobrassicae, Davis.

(Syn. *Siphocoryne indobrassicae,* Das.)

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 188 (1918).
Davis, *Cand. Ent.* Vol. 46, p. 231, XLVI (1914).
Takahashi, *Aph. Formosa.* part II, p. 91 (1923).
HOST. All Cruciferous plants : Collected at Coimbatore.

In association with *Myzus persicae* it is generally found attacking our Cruciferous vegetables. It is a light green insect with black cornicles.

Rhophalosiphum avenae, Fab.

(Syn. *Aphis avenae,* Fab.) (*Siphocoryne avenae.* Pergande, *Aphis padi,* Kalt, *Siphonaphis padi,* V. D. Goot).
HOST. Ragi roots (*Eleusine coracana*).
Collected at Coimbatore.

Brevicoryne corianderi, Das.

Das. *Mem. Ind. Mus.* Vol. VI, No. 4, p. 180 (1918).
HOST. Coriander : Collected at Coimbatore.

This insect is found on Coriander from December to January attacking the umbels at all stages. Being found in large numbers it causes the inflorescences to dry up. It is a small green insect distinguished by the stout body and the short cornicles swollen in the middle.

Toxoptera graminum, Rond.

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 196 (1918).
HOST. Ragi and Wheat : Collected at Coimbatore.

This insect, which has attained some notoriety in the United States and is known as the Green Bug or the Spring

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Grain Aphis, is found in some numbers at Coimbatore from August to October. A light green insect with black tipped cornicles mostly found attacking the undersurface of the leaves. Had it not been for the heavy parasitisation to which it is subject, it would perhaps have been a serious pest in South India also.

Toxoptera aurantii, Boyer.

(Syn. *Ceylonia theaecola*, Buck.)

Takahashi, *Aphididae of Formosa*, pt. II, p. 194 (1923).
HOST. Pepper (Y. R. Rao) Jack and Tea; Collected from Coimbatore, Travancore and British Malabar.

This blackish green insect though known as a pest of Citrus trees is not found here on those plants.

Aphis gossypii, Glover.

(Syn. *Aphis Citruli*, Ashmead) (*A. cucumeris*, Forbes).

Das, *Mem. Ind. Mus.* Vol. VI. No. 4. p. 219. (1918).
Lefroy, *Ind. Insect Life*, p. 747 (1909).
Fletcher, *Some South Indian Insects*, p. 499 (1914).
Takahashi. *Aph. Formosa* part II, p. 197, (1923).
HOST. Cotton, Guava, *Lantana*, *Ocymum canum*, *Euphorbia sp.*, *Tridax sp*, *Vernonia sp.*, *Solanum sp.*, *and Hibiscus sp.* Collected from Coimbatore, Bangalore, British Malabar, Travancore and the Ceded Districts.

This is a polyphagous insect green to yellow in colour and always a serious pest of all the local Malvaceous plants. It does some damage to Cambodia cotton from December to August at Coimbatore. There is a good lot of variation in size.

Aphis medicaginis, Koch.

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 203 (1918).
Takahashi, *Aph. Formosa*, part II, p. 191 (1923).
Gillette, *Jour Eco. Ent.* Vol. I, p. 177-178 (1908).
HOST. Most of the leguminous plants including Lab-lab. Red Gram, cluster beans, Lucerne, Indigo, and *Sesbania grandiflora.* Collected from Coimbatore and Travancore.

This is always a serious pest of Leguminous crops. Adults are shining black (dark brown) and the nymphs duller in colour. From October to January it badly infests Lab-lab shoots and inflorescence.

Aphis malvae, Koch.

(Syn. *A. cucurbiti*, Buck.)

Das, *Mem. Ind. Mus.* Vol. VI. No. 4, p. 213 (1918).
Takahashi, *Aph. Formosa*, part 1, p. 99 (1921).

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HOST. Almost all the local Cucurbitaceous plants: Collected from Coimbatore, Bangalore, Travancore, British Malabar.

This insect in spite of its very small size is capable of doing some damage to our edible Cucurbits. It is smaller than *A. gossipil* but has all the colour variations of it.

Aphis taveresi, Delguercio.

Takahashi, *Aph. Formosa*, part II, p. 102 (1923).
HOST. All Citrus species; Collected from Coimbatore, Travancore, Shevaroys and Ceded Districts.

This is a very dark reddish brown insect. The nymphs are a little lighter in colour. A serious pest of orange and lime trees all over South India. Specimens collected from wild Citrus at Peermade are bigger than those from cultivated Citrus species.

Aphis maidis, Fitch.

(Syn. *Aphis sorghi*, Theobald, *A. adusta*, Zehnt.).

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 208 (1918).
Lefroy, *Ind. Ins. Life*, page 745 (1909).
Takahashi, *Aph. Formosa*, part II, p. 107 (1923).
HOST. Sorghum, Maize, and *Cynodon dactylon*; Collected at Coimbatore.

This is almost a serious pest of *Andropogon sorghum* at Coimbatore. It attacks the tender rolled up central shoots on the inner side. It does not attack sugarcane under natural conditions but when artificially introduced it thrives. The colour varies from light green to dark green. It is subject to heavy parasitisation by a Hymenopteron.

Aphis sacchari, Zehnt.

(Syn. *A. miscanthi*, Takahashi.)

Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 206 (1918).
Takahashi, *Aph. Formosa.* part II, p 108 (1923).
HOST. Sorghum and sugarcane; Collected at Coimbatore.

It is not a serious pest of Sorghum or sugarcane, but occasionally multiplies to large numbers. In April one can see many solitary winged forms on the under surface of the Sorghum leaves, evidently migrating from some other plants.

Aphis nerii, Boyer.

(Syn. *Myzus nerii*, Boyer; *Aphis asclepiadis*, Theobald.)

Bull. Ent. Res. Vol. IV, p. 328 (1913-14).
Das, *Mem. Ind. Mus.* Vol. VI, No. 4, p. 204 (1918).

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Takahashi, *Aph. Formosa*, part. II, p. 38 and 104 (1923).

HOST. Asclepiadaceous plants as *Calotropis gigantea*, *Cryptostegia grandiflora* and *Daemia sp.* Collected from Coimbatore and Bellary.

A typical bright yellow species generally found throughout the year on the undersurface of the leaves. It is remarkable that it does not infest any Apocynaceous plants here.

Aphis rumicis, L.

Gillette, *Jour. Eco. Ent.* Vol. 3, p. 406 (1910).
Theobald, *Bull. Ent. Res.* Vol. 4, p. 329 (1913-14).
Davidson, *Bull. Ent. Res.* Vol. 12, p. 81 (1921-22).
Das, *Mem. Ind. Mus.* Vol. 4, p. 203 (1918).
HOST. *Solanum nigrum*—Collected at Coimbatore.

A dirty black aphis always a serious pest of Solanum nigrum. It infests the undersurface of the leaves and twists them into curious shapes. The tender shoots easily succumb to the attack. It is observed usually from September to December.

Aphis odinae, V. D. Goot.

HOST. *Odina wodier*, *Mangifera indica*, and *Hamelia patens*. Collected from Coimbatore and Bangalore.

A light reddish brown insect found on mango trees during the flowering season, sometimes heavily infesting the inflorescence.

Aphis ficus, Theobald ?

Theobald. *Bull. Ent. Res.* Vol. 8, p. 276 (1917-18).
HOST. *Ficus bengalensis* : Collected at Coimbatore.

A green to dark green insect occasionally found on the undersurface of the leaves and on the tender shoots of *Ficus bengalensis*. Winged forms are very rare.

Aphis donacis, Pass.

HOST. *Arundo donax*—Collected at Coimbatore.

Throughout the year it is found attacking the tender leaves of *A. donax*. There is a certain amount of white dust on the body scattered here and there.

Anuraphis helichrysi, Kalt.

(Syn. *Brachycaudis pruni*, V.D. Goot.)

Das, *Mem. Ind. Mus.*, Vol. 6, No. 4, p. 222. (1918).
Takahashi, *Aph. Formosa*, part 1, p. 59 (1921).
HOST. *Ageratum sp.* Collected at Coimbatore.

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This species though a serious pest of peaches in North India is rarely found in South India. It has been collected from *Ageratum sp.* the leaves of which it curls into pseudogalls. The whole shoot becomes malformed and the plant arrested in growth.

Setaphis bougainvilliae, Theobald.

Theobald, *Bull. Ent. Res.* Vol. XI. p. 70 (1920-21).
Host. *Phyllanthus emblica.* (T.V.R.) Collected at Coimbatore.

This was described from Africa on Bougainvillia by Theobald. The alate forms have the hind wings reduced, there being only a single vein. Throughout the year it occurs in large numbers on *Phyllanthus emblica.* It does not thrive here on Bougainvillia even when artificially introduced.

Greenidea artocarpi, Westwood.

Westwood, *Trans. Ent. Soc. London,* 1890, p. 649.
Host. *Artocarpus integrifolia:* Collected from Malabar.

This is distinguished by the peculiarly long and hairy cornicles. It occurs from November to January.

Dilachnus krishni, Sp. Nov.

Apterous viviparous female. Blackish brown. Body densely hairy all over. Of oval shape. Head small, divided. Vertex hairy. Eyes small. In specimens treated with potash, apices of femur and tibia, the margins of cauda and anal plate, and the tip of cornicles dusky. The hairy cones on which the cornicles are situated brownish. Antennæ slender and shorter than front tibiæ. Hairs on the antennæ similar to the hairs on the limbs, but longer than those on the body. Third joint of the antennæ has no sensoria. The fourth bears on the terminal half 5 or 6 medium-sized circular sensoria. The fifth and sixth segments bear sub-apically a large sensorium each. The relative length of joints, as follows :—

III. 83–85 ; IV. 35–36 ; V. 28 ; VI. 27.

Rostrum slender and reaches the hind coxæ. In some specimens it reaches the middle coxæ only. Cornicles situated on large hairy cones. Cauda rounded and bears many long bristles. Anal plate broader than cauda, broadly rounded and bears bristles similar to those on cauda. Tibia stouter than antennæ. Hind tarsi much longer than the sixth antennal joint. second tarsal joint about three times the first.

Length of antennæ about 1·65 mm.
Length of body about 5 mm.
Length of hind tibiæ about 3 mm.

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Alate viviparous female. Blackish brown. Oblong in shape. Body hairy as in apterous viviparous female. Head divided. Vertex hairy. Antennæ slenderer than limbs. Hairs on the antennæ similar to those on the limbs. Third joint of the antennæ studded with a number of circular, medium sized sensoria arranged almost in rows. Fourth joint bears 7 to 10 sensoria. The fifth bears 4 sensoria of which the sub-apical one is larger than the others. The sixth bears the usual apical one at the base of the terminal process. Relative lengths of the joints as follows:—

III. 75–79; IV. 36; V. 26–28; VI. 22–25.

Wings hyaline. First oblique of the front wing straight. Second slightly curved. Third obsolete at base, twice formed. Stigma long and the stigmatic vein somewhat curved. Hind wings with 2 divergent obliques. Hooklet one. Cornicles situated on hairy cones which are narrower than those of the apterous forms. Cauda and anal plate almost as in the apterous form. Tibiæ not much stouter than antennæ. Front tibiæ longer than antennæ. Hind tarsi almost twice as long as the sixth antennal joint. Second tarsal joint about three times as long as the first.

Length of antennæ about 1·5 mm.
Length of body about 4·1 mm.
Length of hind tibiæ about 3·5 mm.

Described from several specimens. This aphid distinctly differs from *Lachnus pyri*, Buckton in having more sensoria on the third joint of the antennæ of the alate form and in the absence of the dorsal tubercles. The characters of the antennæ differentiate it from *Lachnus himalayensis* V.D. Goot also.

Locality. Coonoor (Nilgiris), 4,000 ft.

Host. Pears. *Collector.* P. N. Krishnan. Named in honour of the collector.

Eriosoma lanigerum, Hausman.

Host. Apple. Collected from the Nilgiris.

This notorious woolly aphis is a serious pest of apples all over Nilgiris. The pruned ends of branches and the twigs are almost fully covered with these in the case of a bad attack.

Tetraneura ulmi, De Geer.

(Syn, *Tetraneura javensis*, V.D. Goot; *T. Yesoensis* Mats.)

Host. Almost all the common grasses. Collected from Coimbatore and Bellary.

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It is a pest of Sorghum and Ragi (*Eleusine coracana*) at Coimbatore attacking the roots and the damage caused is rather serious.

Tetraneura cynodonti coimbatorensis, Subsp. Nov.

Host. Sugarcane roots. Collected at Coimbatore.

Apterous viviparous female. Body glistening white in colour. Spirit specimens dull white. Head thorax limbs, cauda and cornicles yellowish brown. The tip of the antennæ and the tarsi darker still. Dorsal surface completely arched. Body sparsely covered with moderately stout bristles. The hairs of the antennæ and legs more slender. Head small. Eyes small and insignificant. Antennæ thinner than limbs, four segmented, of which the first and second are subequal and almost equal to one-third of the third. The fourth including the small fine terminal process is about two-thirds of the second. The relative lengths of the antennæ is as follows :—

I. 18 ; II. 19 ; III. 55 ; IV. 13.

The third segment bears a small sub-circular sensorium towards the apex. The fourth segment also bears a similar but larger sensorium apically. Rostrum stout and reaches the middle coxæ. Wax plates nine in number found marginally on either side of the dorsal surface. Femore stouter and longer than tibiæ. Cornicles small, situated on elevated cones. Cauda round with six moderately long bristles. Anal plate bilobed and bears marginally a number of bristles.

Length of body	1·9 mm.
Length of antennæ	1·37 mm.
Length of longest bristle	·175 mm.

Alate viviparous female. Body yellowish brown in colour. Head meso and meta-thorax and legs dark brown. Body oblong. Hairs on the whole are much finer than those of the apterous form. Antennæ mostly five jointed but occasionally six jointed. In six jointed antennæ the third splits into a longer and a shorter piece giving rise to a fourth joint. The relative lengths of the antennæ is as follows :—

I. 19 ; II. 19 ; III. 82 ; IV. 50 ; V. 15.

Sensoria narrow, annular almost encircling the segment. The distribution of sensoria :—

III. 15–18 ; IV. 6–8 ; V. 1.

Rostrun reaches the middle coxæ. Wings hyaline, Venation typical. Cornicles mere elevated rings. Cauda round with a few bristles.

Length of body	2·0 mm.
Length of antennæ	0·67 mm.

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This insect is more related to *Tetraneura cynodonti*, Theobald, than to *T. ulmi* De Geer, though it differs from the former in the posterior wax plates and antennal characters.

Geocia cynodonti, Das.

Das, *Mem. Ind. Mus.*, Vol. 6, No. 4, p. 153 (1918).
Takahashi, *Aph. Formosa*, part 1, p. 97 (1921).
Part. II, pp. 54 and 152 (1923).
Host. *Cynodon dactylon.* Collected at Coimbatore.

This species was collected on *Cynodon dactylon* growing on the bunds of paddy fields. Wax secretion is very abundant and one could easily locate the insect by the white pulverescence on the ground. The tender leaves of the grass are malformed into pseudogalls and the insect lives inside. Winged forms are rare. The insect is ashy grey in color and is covered with an abundance of flocculent material.

Geoica, Sp.

Host. *Andropogon sarghum.*
Collected at Coimbatore.

This species is referred to in the paper on "Root sucking Aphids" of Coimbatore in *Journ. Proc. Asiat. Soc. Bengal*, 1925.

Forda orientalis, Sp. Nov.

Host. *Andropogon sorghum.* Collected at Coimbatore.

Apterous viviparous female. Yellowish white. Very much arched dorsally. Of oval shape. Head small. Eyes of three facets insignificant. Antennæ whitish. Legs yellowish brown. Apices of tibiæ tarsi and the tip of the rostrum dusky. Body covered with a sparse coat of short fine hairs. Hairs on the limbs and antennæ longer than those on the body. Antennæ slender. The fourth joint bears a small protruding sensorium sub-apically. The fifth joint has as usual moderately sized sensorium at the base of the spur. The relative lengths of the joints as follows:—

I. 33; II. 34; III. 87; IV. 44; V. 60.

Rostrum reaches the middle coxæ. Cornicles absent. Cauda long and round with a few bristles. Legs short, stout. Tibiæ stouter than antennæ. Front tibiæ shorter than antennæ. Hind tarsi shorter than the third but longer than the fifth antennal joint. Second tarsal joint three times as long as the first. Length of antenna about 9 mm. Length of body about 3·5 mm.

Alate viviparous female. Head, eyes, antennæ, thorax

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and limbs dark brown. Other parts of the body yellowish brown. In some specimens the prothorax is also light brown. Wings hyaline. Stigma yellowish brown. Sub-costa almost dark brown.

Body oblong. Head divided, much wider than long. Vertex with many fine hairs. Eyes well developed with small tubercles. Body covered with fine short hairs as in the apterous form. Hairs on the limb and antennæ longer than those on the body. Antennæ five jointed. The third segment bears 30 to 35 sensoria of different sizes of which a few are relatively much larger than the others. Fourth segment with 2 sensoria just before the terminal large one. Fifth bears a large sensoria with three or four smaller ones around it at the base of the spur. The relative lengths of the joints as follows: III. 130; IV. 48; V. 58. Cauda round, with a few long bristles. Anal plate shorter but broader than cauda broadly round with many long bristles. Hind tarsi longer than the fifth antennal joint. Second tarsal joint three times as long as the first.

Length of antennæ about 1·00 mm.
Length of body about 2·9 mm.
Length of forewing about 3·3 mm.

This species is near *Forda trivialis* Pass. but differs from it in the fourth joint of the antennæ being longer than the second and in the length of the antennæ of the apterous viviparous female being less than one-fifth of the length of the body. The antennæ of the alate form are also different.

Oregma insularis, V. D. Goot (?).

Host. Bamboo. Collected at Coimbatore.

The pervading color in the apterous form of this species is dark green though the head and the hinder end of the abdomen are yellowish. The body is flattened with white flocculent material at the sides. Cornicles are mere rings. Winged forms are darker in colour with little or no flocculent material. The wings are held horizontally in repose.

Chermes himalayensis, Stebbing ?.

Host. *Pinus longifolia*, Collected from the Nilgiris, Coonoor.

These were collected in May. There were clusters of eggs also covered over by a woolly material. The eggs were of yellowish brown colour. Just hatched nymphs were light brown. The young ones could be seen wandering about the branches before they permanently fix themselves.

Reproduction. So far as the author's observations go, all

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the species of Aphids at Coimbatore breed parthenogenetically throughout the year and sexual forms have never been observed. The absence of a sexual generation is possibly due to the absence of a definite winter season here.

Factors controlling Multiplication. A cool humid atmosphere insures abnormal multiplication whereas dry weather not only retards reproduction but causes excessive mortality, and it is needless to say that an abundance of plant sap always remains a potent factor in the multiplication of aphids.

Wing production. On the other hand scarcity of sap caused by severe local attack always tends to produce winged forms, so much so that in a new situation wingless forms predominate and as food supply diminishes, more and more winged ones are produced, provision being thus made for migration. Since no sexual forms are produced here, scarcity of food supply is perhaps the sole factor which controls wing production.

Association with Ants. It has been found by experience that these Aphids do not multiply or even thrive if ants are not in attendance on them. But two species namely *Greenidea artocarpi* and *Geoica cynodonti* are not being visited by ants. The black ant *Camponotus compressus* and the tree ant *Cremastogaster sp.* and the red ground ant *Solenopsis geminata* are the common species associated with aphids. An account of the relationship between the Root-sucking aphids of Coimbatore and ants is given in a paper on Root-sucking Aphids of Coimbatore by the writer. (*Journal and Proceedings of the Asiatic Society of Bengal*, 1925.)

Natural Enemies. Many species of Coccinellids and their larvae, Syrphid larvae, larvae of Hemerobiinae and Chrysopinae, an Anthocorid bug and the larvae of an Agromyzid (*Leucopis sp.*) are some of the predators of Aphids noted so far at Coimbatore. A few Hymenopterous internal parasites were also noted on *Aphis gossypii*, *Aphis nerri*, *Toxoptera graminum* and *Myzus persicae*. A detailed account of these natural enemies is reserved for a separate publication.

Before concluding this paper the writer wishes to express his gratitude towards Dr. Ryoichi Takahashi of Formosa who has rendered him very valuable help in the determination of these species, and also to Rao Sahib Y. Ramachandra Rao for his guidance and advice throughout the investigation. His thanks are also due to Mr. Laing of the British Museum for allowing him to examine some of the type-specimens.

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The Origin and Mineral Constitution of the Late Tertiary Fossil Wood of Burma.

By Harbans Lall Chhibber.

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With the exception, perhaps, of precious stones like rubies, the fossil wood of Burma has attracted the attention of travellers more than any other mineral substance. It was noticed as early as the end of the eighteenth century or early in the nineteenth by travellers like Symes,[1] Crawfurd,[2] Yule,[3] and Oldham.[4] Before Theobald began its scientific study, its nature and mode of origin were quite obscure. Certain quaint theories were advanced to explain its origin. There was a popular belief in the petrifying virtue of the river Irrawaddy and Lieutenant Alexander[5] attributed the fossil wood to this origin; an assertion long ago contradicted by Dr. Buckland.[6] Theobald was so struck by the enormous quantity of fossil wood in the Irrawaddian of Burma that he named it the "Fossil wood group." He attributed the silicification of the wood to the agency of springs in the following words: "We may conjecture that the trunks of trees in question floated about water-logged in shallow lakes, in which on sinking they became mineralised through the agency of springs holding silica in solution; and it seems not improbable to connect the existence of such springs with the volcanic activity which we know prevailed about this time, as indicated by the extinct volcanic vent of Puppadaung."[7]

This hypothesis has been called in question by Dr. Pascoe and earlier was strongly criticised by Noetling because of the absence of any associated siliceous sinter which one would expect if Theobald's theory was correct. It will be of advantage to quote Noetling verbatim.[8] "Mr. Theobald having observed that the fossil wood when found *in situ* never exhibits any signs

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[1] Symes: Embassy to the Kingdom of Ava in 1795.
[2] Crawfurd: Embassy to the Court of Ava in 1827.
[3] Yule: Mission to the Court of Ava, 1858
[4] Oldham: Geological Papers on Burma, 1880.
[5] Prof. Buckland: On the supposed petrifying quality of the Irrawaddy, *Edinb. New Phil. Journ.*, Vol. 6.
[6] Dr. Buckland's supplementary remarks on the supposed power of the waters of the Irrawaddy to convert wood to stone—*Trans. Geol. Soc. London*, 2nd *Ser.*, Vol. II.
[7] *Mem. Geol. Surv. India*, Vol. X, Pt. 2, 1873.
[8] *Rec. Geol. Surv. Ind.*, XXVIII (1895), 83.

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of being rolled or otherwise worn away, nor gives any other indication of transport, therefore assumes that the wood could not have been in a petrified state prior to being embedded in its present position. He therefore supposes that petrifaction took only place after the trees had found their present resting place, an assumption which he explains by the following quaint theory. He supposes that the trunks of trees floated about till water-logged in shallow lakes, in which, on sinking, they became mineralised through the agency of springs holding silica in solution.

"The logical outcome of this theory is, that wherever a single specimen of a silicified log is found *in situ*, we are bound to suppose that just underneath that very log, a spring rose, in order to petrify it, and, having done its work, disappeared without leaving behind it any other traces of its activity. The absurdity of such a theory is too evident, and no more need be said about it,....."

The theory put forward by Theobald has to be rejected not only because of the absence of siliceous sinter and masses of chert but also because of the discrepancies in age between the Irrawaddy Series—the repositories of fossil wood—and the important volcanic rocks of Burma. The author has studied many of the volcanic rocks of Burma, viz. those of the Lower Chindwin area (*Trans. Mining Geol. Inst. India*, Vol. XXI, 1927), Kabwet area, Shwebo and Mandalay districts (*Trans. Mining Geol. Inst. India*, Vol. XXI, 1927) and Mount Popa area (*Trans. Mining Geol. Inst. India*, Vol. XXI, 1927). It has been definitely established now that the volcanic activity in these areas is comparatively of a very recent date and the eruptions occurred sometimes towards the close but mainly after the Pliocene period, when the Irrawaddy Series, the famous storehouse of fossil wood, was already in position. The basaltic lava of the hill opposite Kyaukmyaung, about 45 miles north of Mandalay, was found to distinctly overlie the Irrawaddy sands. Further at Mount Popa very interesting evidence was recorded proving that the fossil wood was already in existence when the lava was poured out. Undoubted specimens mainly of dicotyledonous wood (see Plate 1, Fig. 2) were picked up from the slopes of Mount Popa associated with volcanic rocks. These were caught up by lava during its eruption and may be compared to xenoliths. The pieces of fossil wood in this case have been turned greyish black and have been partly changed as revealed by the microscope from the normal silicified wood by the heat of the lava. Similarly the pieces picked up (south of Mount Popa) near the village of Gwegon and Kyaukpadaung hills, associated with rhyolitic tuffs, corroborated this evidence. The latter specimens consist of white and yellow opal, break with conchoidal fracture and have a specific gravity of only 2·02. Under the microscope the thin sections are

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isotropic; they consist of opal and differ entirely from the material of the normal type of silicified wood (see Plate I, Fig. 3). All this tends to show that the fossil wood had been formed long before the volcanic activity, which is mainly post-Irrawaddian. Moreover, fossil wood is abundant in certain facies of the Pegu rocks, especially in the Shwethamin type south of Mingin, Lower Chindwin and in the lower part of the Pondaung sandstones (Eocene). If the silicification had been due to the agency of siliceous springs consequent upon volcanic activity, fossil wood would have been much more localised. Its universal presence, in the Irrawaddian always and Peguan sometimes, shows that such an origin as that suggested by Theobald localising its formation to a few places does not hold good.

Recently Murray Stuart[1] has propounded a peculiar theory to explain the formation of the fossil wood of Burma and tries to connect the origin of oil with it. According to him wood was fossilised at the Arakan Yomas by siliceous springs, and then it was merely a case of transportation and preservation in the Irrawaddy System. It may be mentioned that some of the logs of silicified wood exceed 40 feet in length and a foot in diameter and the difficulties presented by transportation for more than 100 miles would be enormous. If Murray Stuart is correct, the fossil wood should have been included in every bed irrespective of its composition. But we find from the study of the Pegu and the Irrawaddy Series that fossil wood is present only in the siliceous rocks, while it is conspicuously absent from the silty clays, as noted by Theobald also on page 68 in his memoir[2] referred to above. Theobald attributed the absence of fossil wood from the clay to the abeyance of volcanic activity during that period. This has already been disproved beyond doubt. The truth seems to be that when the deposition of clay was going on, colloidal silica which petrified wood was not available, or else the solutions could not penetrate the clays and hence the absence of fossil wood in these clayey beds. At times the author has observed fossil wood in the Peguan clay, but there the colloidal silica necessary to petrify the wood seems to have been derived from the interbedded sandstones.

Further, Murray Stuart records: "Also the strata of the Irrawaddy system do not show any evidence of having been permeated extensively by siliceous waters, such as might be supposed to be instrumental in the replacement of wood by silica. Had such siliceous waters permeated the siliceous sands of the Irrawaddy system one would expect that in parts at least, the sandstones would have been converted into quartzites, which is not the case." Where is the necessity of bringing

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[1] *Journ. Inst. Petrol. Technologists*, Vol. XI, No. 50, pp. 296–304.
[2] *Mem. Geol. Surv. India*, Vol. X, Pt. 2, 1873.

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extraneous siliceous solutions to petrify wood? The waters laying down the deposits of sand-rock and sandstones so characteristic of the Irrawaddy Series, were siliceous enough to cause the replacement of wood by colloidal silica associated with them. Further Murray Stuart goes on to say "The Negrais rocks which occupy the eastern flank of the Arakan Yoma range, on the other hand, do exhibit evidence of having been extensively permeated by siliceous waters. The rocks are infiltrated, indurated, and veined with silica and chert in a most striking way, so much so that this characteristic defines the Negrais rocks....Now the Irrawaddy system not only consists essentially of siliceous sedimentary rocks, but its conglomerates consist almost entirely of quartz pebbles, and it seems the simplest explanation to assume that between the first and second main phases of the Himalayan uplift the newly elevated Arakan Yoma Island was subjected to an outpouring of siliceous springs (whether thermal or not it is impossible to say) which not only caused the induration and infiltration with silica of the rocks they passed through, but also deposited a certain amount of silica on the surface. After the second main phase of the uplift, much of the silica so accumulated would be removed by denudation and erosion to form the sands and conglomerates of the Irrawaddy system." The theory is untenable as it is impossible that such a vast and thick system of deposits approaching about 10,000 feet at places could have been deposited by the denudation of the siliceous cherty beds, accumulated by the siliceous springs issuing from the Arakan Yoma. The Arakan Yoma then must have formed a small narrow island with a relatively low elevation. So far it has been held that the "Burmese Gulf" existing then has been mostly filled up by the predecessors of the rivers Irrawaddy and Chindwin. Moreover the present geography of Burma does not lend much support to Murray Stuart's theory as very few important streams are seen flowing from the Arakan Yomas at the present day. Further, the siliceous cherty beds occurring in the Negrais rocks are very compact and fine-grained, and it is therefore impossible to perceive how the latter could give rise to typical coarse quartz sands of the Irrawaddy Series; while on the other hand it is definitely known that granitic rocks exist on the Shan Plateau or areas towards the north, which on weathering might have yielded sand-rock, etc., of the Irrawaddy Series. The presence of felspar, mica, etc., in the Irrawaddy sands makes it impossible to believe that they have been derived from the cherty beds of Negrais rocks Above all, the supposed activity of siliceous springs which has been presumed to have infiltrated a little silica in the Negrais rocks does not seem to have survived any longer, as the overlying Eocene rocks. Sitsayan shales (Pegu Series), etc., are typically free from any such siliceous injections

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connected with the siliceous springs. It is, therefore, very unsound to build any such hypothesis on the siliceous activity that prevailed during *Cretaceous* times and connect the origin of *Mio-Pliocene* fossil wood with it. This theory of "siliceous springs phase" on the Arakan Yoma Island, is therefore, as untenable and imaginary as Theobald's theory of siliceous springs connected with volcanic activity. The author would like to have gone further into the question of origin of oil but as the scope of the paper does not allow, suffice it to note that the ingenious theory of the origin of oil connected with such an origin of fossil wood automatically falls to the ground, as shown above. In this connection it may be pointed out that the silicification of wood went *pari passu* with the deposition of siliceous rocks, viz. sandrock and sandstones of the Irrawaddy Series and the preservation of fossil wood in this case is quite similar to the entombment of other fossil organisms which are so commonly observed in the strata composing the earth's crust.

Mineralogical Constitution of the fossil wood.—Before the author advances his own theory regarding the origin of fossil wood, it will be advantageous to consider its mineralogical constitution.

Physical Characteristics.—The colour of the siliceous specimens shows great variety. It varies from milk white (opaline), pale yellow, deep yellow, buff, brownish to light grey, while reddish and brownish tints are especially characteristic of ferruginous specimens. Whitish colour of the fossil wood is to be noticed particularly when the chalcedonic silica changes under atmospheric conditions to hyaline silica, a very common change, which was even observed when thin sections were left unmounted for some time exposed to the atmosphere.

Among the siliceous specimens chalcedony, opal and microcrystalline quartz are seen forming the constitution of fossil wood. But these specimens are not infrequently stained with iron and sometimes there is fine granular calcite associated with the rock. But generally the ferruginous and calcareous material go together in the same specimens. But sometimes silica, carbonates of lime and iron were observed to occur together as in P/439. A piece of lignitised wood was brought to the author by the Myo-thugyi of Popa village.

The thin sections of the siliceous specimens under the microscope are seen to consist of crypto- or micro-crystalline silica in a very fine state of dispersion. In the slide P/349 the irregularly concentric bands (often seen in chalcedony on a megascopic scale) were very clearly visible, with staining by iron salts showing the undoubted presence of chalcedony. It will appear from the account given above that the following statement made by Dr. Murray Stuart in his paper on "The Eocene Lignites and Amber Deposits of Burmah and their Rela-

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tionship to Certain Occurrences of Mineral Oil"[1] is not correct. "Other than adjoining the old Chinese mainland the author does not know of any examples of calcified fossil wood, and agrees with Theobald and Oldham in believing that all the fossil wood derived from the Arakan Yoma Island is silicified and not calcified." This only indicates his limited range of collection of specimens as the author, besides the siliceous specimens, has undoubted calcareous and ferruginous specimens of fossil wood from the neighbourhood of Mount Popa, Myingyan district, Upper Burma, situated right in the heart of Burma.

Theobald[2] makes mention of a piece of wood from near Yenangyaung in the Indian Museum, Calcutta, which has been impregnated with gypsum.

One thing is remarkable that in certain sections different minerals appear to have replaced different structures of wood and thanks are due to Dr. S. L. Ghosh for kindly assisting in ascertaining the botanical structures. In P/439 (a transverse section of a monocotyledon) both silica and carbonates of calcium and iron are seen to have replaced the fossil wood. The softer tissue such as the parenchymatous ground tissue seems to have been infiltrated by carbonates of calcium and iron, while the broad bundles of vascular tissue are found to be full of silica (quartz). In this specimen silica deposited is in the form of perfect doubly terminated crystals and was then obviously the first mineral to be deposited. The cavity of the vessel is seen filled with beautiful transverse sections of hexagonal shape which show zonal development (see Plate 2, Figs. 4 and 5). In the living plant the vessels form the usual passage for the movement of water and it would seem acted in the same way for the siliceous solutions on the death of the plant. The parenchymatous tissue has been replaced by carbonates of iron and calcium which must have percollated through later and more slowly. Scattered through the brownish mass of iron carbonate are numerous dark nuclei, probably of haematite about which the growth of the carbonate may have taken place. This is well seen in P/440 (longitudinal section of P/439). It will be noticed that P/440 differs essentially from the majority of specimens of the fossil wood in that crystalline silica and not colloidal silica was deposited.

P/390 is almost entirely silicified but there are colourless areas, representing the large vessels, occupied by a fine mosaic of quartz and also areas stained brown representing the softer tissues where the grains of quartz tend to be larger.

Both Noetling[3] and Dr. Pascoe[4] have surmised the colloidal origin of silicified fossil wood of Burma as the fossil wood in the

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[1] *Journ. Inst. Petrol. Technologists*, Vol. XI, No. 52, p. 476.
[2] *op. cit.* [3] *Rec. Geol. Surv. Ind.*, Vol. XXVIII, 1895.
[4] Oilfields of Burma, *Mem. Geol. Surv. India*, Vol. XL.

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Libyan desert has been shown to have originated in that way. The writer is of strong opinion that the origin of fossil wood was due to colloidal material associated with waters laying down the deposits in which it is entombed. It is to be noted that the petrifying material is not only siliceous but sometimes calcareous and ferruginous and occasionally the wood is carbonaceous.

If we consider the lithology of these rocks containing fossil wood the origin of colloids will at once be clear. As remarked above the fossil wood is a universal constituent of the Irrawaddy series, though it has also been recorded from the Pegu series and in the Plateau gravel. In the latter it is only derived from the Irrawaddian. The Irrawaddian rocks mainly consist of soft sandstones or sand-rock, occasionally with a little clay. The chief constituent of the sandstones and sand-rock is a clear water-worn quartz intermixed with felspar and mica. Various forms of concretions, siliceous, calcareous or ferruginous, which will be referred to later on, are not infrequently present in the series. It is very likely that during the process of simple weathering resulting in the deposition of the sand-rock and sandstones some mineral matter must have passed into colloidal suspensions by the comminution of mineral fragments of quartz, etc. Moreover, as Cornu has shown, chemical weathering, which includes such changes as solution, oxidation and deoxidation, hydration and dehydration is always accompanied by the formation of gels. The original silicates are hydrolysed, with the leaching of silicates and the formation of free silica in part colloidal, in part fine-grained crystalloidal.

The two forms of colloidal silica are chalcedony and opal, and they have been prepared in the laboratory from silica gels. Chalcedony sometimes represents the incipient crystalloidal form while opal is definitely colloidal. It has already been noted above that these two minerals have been definitely recognised making the constitution of several specimens of fossil wood.

In certain specimens the mineral matter is microcrystalline and it has been shown by Doelter [1] that under suitable conditions, say, the influence of pressure the colloids pass into crystalloids. The crystallisation of silica gel is probably quite analogous to the crystallisation of metals or mineral deposits of colloidal origin. As Professor Cecil H. Desch [2] has remarked: "There can be no doubt that both crystallisation and grain growth are possible in masses of metal which have been formed by the aggregation of particles, whether colloidal or merely of

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[1] *Kolloid-Zeitsch.*, 1910, vide Chemical Abstracts of the *Chem. Soc.* (ii), 376, 1911.

[2] *Bulletin* of the *Institution* of *Mining* and *Metallurgy* No. 254, 1925, p. 31.

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microscopic size. When these masses are compacted under pressure, and especially if the pressure be unsymmetrical, so that flow is produced by the shearing forces, the production of crystals and their growth to a large size may occur if the metal should reach a suitable temperature.

"We know little of the behaviour in this respect of crystals other than those of the ductile metals. Experiments with powdered brittle mineral such as quartz have given negative results, but it is highly probable that a mass derived from a silica gel would behave quite differently and might well resemble the metals."

"Once recrystallisation has taken place there would be nothing in the crystals themselves to indicate whether the original mass had been of a colloidal nature or not, but it should be possible to decide the point by an examination of inclusions which would exhibit a different grouping according as they had been present distributed through a colloidal mass or entangled between crystalline fragments."

Now the evidence of pressure we have in plenty in the Tertiary rocks of Burma. It is well known that earth-movements characterised the whole of the Tertiary period and have not ceased even at the present day. Further, under the microscope, the evidence of strain is quite conclusive as in certain sections where the grain of the slide is a little bigger, the small particles of silica show wandering extinction, approaching spherulitic structure, which is an undoubted proof of rock affected by pressure. Specimens of fossil wood have also been picked up showing excellent puckering on a small scale, which is as well believed to be due to drying of the wood as remarked below (see Fig. 1). Dr. Stamp considers, however, that the phenomena observed are fully explained as the natural results of dehydration of the 'unstable' hydrous silica and that it is unnecessary to postulate the influence of pressure. He considers the puckering seen in specimens like that figured on Page 25 is entirely due to the drying of the wood before silicification.

Further, the writer has tried to confirm the colloidal nature of the material of fossil wood and approached the question from different directions and both the direct and the indirect evidence go to prove that the origin of fossil wood of Burma is colloidal. The direct evidence included staining tests, specific gravity determinations, water of constitution, microscopic evidence, etc. The writer during the investigation of the geology of certain parts of Burma was able to collect numerous specimens of fossil wood. Some of them were powdered and small quantities of them were treated with different stains. In some cases the staining was very successful. It should be remarked that amorphous material was stained much better than the crystalline. Even with dilute stains there were very satisfactory

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results. The various stains used were malachite green, S fuchsine, acetic alum carmine, etc.

Specific gravity determinations:—The specific gravity determinations also point to the same conclusion that the mineral forming the siliceous fossil wood is chalcedony because the specific gravity of the siliceous specimens ranges from 2·54 to 2·56 and did not go higher than that.

Water of constitution of siliceous specimens was determined at red heat. The opaline specimens yielded about half a molecule of water to one of silica. Those of crystalline silica yielded much less but the loss was quite perceptible probably due to the chalcedonic nature of part of the material.

Indirect evidence consisted in the structural method of determining colloidal origin. A large number of siliceous, calcareous and ferruginous concretions are present in the Irrawaddy and sometimes in the Pegu series. These concretions possess all sorts of fantastic shapes—spheroidal, ellipsoidal, cylinderical, etc. These concretions are sometimes hollow with a kernal of soft ocherous clay and at others they are solid, showing fine banded structures. It has been established definitely that the origin of such banded concretions is colloidal and similar structures have been produced in the laboratory. Liesegang,[1] Cornu[2] and others have carried a great deal of experimental work and have shown that the concentric structure is due to rhythmic precipitation of colloidal material. Further ferruginous conglomerates also occur in the same formation which contains the fossil wood. The cement of these conglomerates is mainly ferric oxide and it is quite well known that the hydrated ferric oxide in a colloidal state behaves similarly as the silica gel as binding material. It is, therefore, quite clear that the material forming these concretions and cement of the conglomerates has a colloidal origin. It is, therefore, argued that the colloidal solutions which were instrumental in the formation of these concretions etc., also supplied material for the formation of the associated fossil wood in the same series.

The mechanism of the petrifaction of wood is not at all different from that of the other fossil organisms which are commonly preserved in the marine strata. It is the molecular replacement of the woody tissues by silica or other mineral matter. The ferruginous, siliceous or calcareous cementation of sandstones, for instance, is undoubtedly due to a similar action.

Nature of fossil Wood:—A word in passing may be said about the nature of wood that has been found fossilised. As already familiar, both monocotyledonous and dicotyledonous

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[1] Geologische Diffusionen, Dresdon, 1913.

[2] Fourth Report of Colloid Chemistry: The application of Colloid Chemistry to Mineralogy and Petrology by Alexander Sc...

पुस्तकालय

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specimens are present in the collections made by the writer. The former include palms, picked up close to the Pegu-Irrawaddian boundary, a fact also recorded by Dr. Pascoe in his excellent memoir.[1] It is believed by the natives that the fossil palms represent the living toddy trees (*Borassus flaballifer*), but, however, the specimens have been sent to Dr. Sahni for investigation who on cursory examination wrote sometime back: "At present I am specially interested in the palm specimens as I have in course of preparation my monograph on the Indian species of which I have already about a dozen *to which your interesting collection will certainly add two if not more.*"

As regards the dicotyledonous wood, which forms the bulk, Miss Ruth Holden[2] described the *Dipterocarpoxylon burmense.* Sections were prepared of specimens of dicotyledonous wood and examined under the microscope, suffice it to say that they showed similar characters to those figured by Miss Holden, but, of course, in certain cases minor modifications were to be noticed. It is to be noted that Dr. Sahni could not make out a single undoubted coniferous wood in the collection sent to him. This will indicate that the climate of the period, when fossil wood was forming, was very similar to that of the present day since conifers are absent practically speaking from the Irrawaddian tract at the present day.

Age of the beds containing fossil wood and the conditions favourable to its formation:—The Irrawaddy series containing the fossil wood is of Mio-Pliocene age while the age of the underlying Pegu series, which also enclose fossil wood at places, is Oligo-Miocene. Sometimes the Plateau gravels of Pleistocene and Sub-Recent age enclose specimens of derived fossil wood from the above mentioned series.

From the study of the conditions known to prevail at the time of deposition of the Irrawaddy series and also from the fossil wood of the Libyan desert of the same age, it may be remarked that fresh-water desertic conditions are very favourable to the petrifaction of wood especially when a large quantity of alkalies is present to decompose the silicates and liberate colloidal silica to be preserved in the woody tissues. It may be necessary to postulate alternate drying and wetting of the wood during the process. Some of the wood certainly seem to have been dried before preservation as it exhibits the remarkable contraction of fibres often seen in dried logs of timber. Dr. Stamp[3] has said concerning the Pondaung Sandstone: "Fossil wood occurs throughout the group; in the lower part it is ALWAYS CARBONISED and trees of considerable size may be traced in

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1 *Mem. Geol. Surv.* India, Vol. XL, 1912.
2 *Rec. Geol. Surv.* Ind., Vol. XLVII, 1916.
3 *Trans. Mining Geol. Inst. India,* Vol. XVII, 1922.

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many of the beds of sandstone by their carbonised "bark." At higher horizons the wood is PARTLY CARBONISED AND PARTLY SILICIFIED and is indistinguishable from the well-known silicified wood of the Irrawaddian. This in itself is almost sufficient to prove the gradual change from shallow-water, probably marine, conditions to terrestrial or desert. Invertebrate fossils are very scarce but near the base of the series a fossiliferous conglomerate was found. It yielded species of ARCA, CARDIUM, CARDITA, etc. This is sufficient to show that the lower part of this group was laid down in shallow marine waters. In the remarkable coloured clays which characterise the higher parts of the Pondaung Sandstone Group, the writer was immediately struck by their close resemblance to the coloured clays and marls which form the 'continental' representatives of several horizons of the Eocene in the Paris region. Silicified wood is usually present and frequently abundant but the interest of the deposits centres around their vertebrate fossils. Bones may be found on careful search in practically every extensive exposure. The most abundant are plates of large turtles and remains of crocodilian reptiles; mammalian remains are more local but include at least one of the species (coming from a similar horizon near Myaing, Pakokku District). The purple and green clays were evidently laid down in lakes or extensive backwaters. Thus through the Pondaung Sandstones one sees the change from shallow marine to fluviatile or lacustrine conditions."

The character of the wood, unfortunately, does not afford conclusive evidence of the climate of Irrawaddian times. The bulk is dipterocarpous (including Dipterocarpoxylon burmense). Half the denizens of the wet, evergreen equatorial forests of Lower Burma at the present day are Dipterocarps, but a Dipterocarp (*Dipterocarpus tuberculatus*) is equally characteristic of the driest forests of Burma. A large quantity of monocotyledonous wood also occurs especially about the Pegu-Irrawaddian boundary. Some of it closely resembles the wood of the Toddy palm (*Borassus flabellifer*) a typical denizen of the dry belt of Burma but this palm is a native of Africa. On the whole the evidence seems to point to the climate of the Irrawaddian being a dry one in Central Burma and it may be that the uprise of the Arakan Yomas at the close of the Peguan interrupted the rain-bearing monsoon winds and instituted the dry, rain-shadow area which persists to the present day.

The investigation was carried out in the laboratory of the Department of Geology and Geography, University College—University of Rangoon. The author wishes to record his indebtedness to the University of Rangoon for financial assistance given in connection with the laboratory work of this paper.

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Summary and Conclusions.

Theobald's theory of petrifaction of wood by siliceous springs connected with volcanic activity has not only to be rejected because of the absence of siliceous sinter and cherty beds but also because of the discrepancy in age between the Irrawaddy series and the main volcanic rocks of Burma, some of which are decidedly younger than the former. Xenoliths of fossil wood were found associated with the andesitic lava of Mount Popa, Upper Burma.

Dr. Murray Stuart's theory cannot be accepted for several reasons: He presumed the fossil wood to have been formed at the Arakan Yoma Island and then transported and entombed in the Irrawaddy series. Apart from the difficulties presented when one supposes silicified logs 50 feet long to have been transported more than a hundred miles we find that the fossil wood is mainly confined to siliceous beds only and is conspicuously absent from the silty under-clays. Again, the siliceous injections in the Negrais rocks are too compact and fine-grained to yield the quartzose sands of the Irrawaddy series. Above all the fossilisation of wood of the Pliocene age cannot be attributed to the siliceous spring phase which characterised the Cretaceous period only and did not survive any longer. The source of fossil wood is not extraneous but within the Irrawaddian arenaceous strata themselves and the fossilisation of wood went *pari passu* with the deposition of the Irrawaddy series.

The constitution of fossil wood is found to be siliceous, calcareous, ferruginous and carbonaceous. Chalcedony and microcrystalline silica generally and opal occasionally have been observed to form the bulk of the specimens while calcite and siderite have also participated in the formation of some specimens. In exceptional cases quartz has been deposited in the broad bundles of the vascular tissues while the parenchymatous tissue has been replaced by carbonates of iron and calcium.

The origin of fossil wood is due to colloidal material associated with waters laying down the deposits in which it is preserved. The lithology of the Irrawaddy series supports such an origin. Both mechanical and chemical weathering must have helped in the formation of colloids. Some of the colloidal material seems to have been changed into crystalloidal afterwards.

It has been tried to prove the colloidal origin of wood by experimental evidence which included the staining tests, specific gravity determinations, water of constitution and microscopic examination, etc. The structures of some of the concretions associated with fossil wood show rhythmic banding or the so-called *liesegang* rings and it is probable that the solutions which originated these concretions were also instrumental in the replacement of wood.

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Mechanism of the petrifaction of wood consisted in the molecular replacement of the woody tissues by silica or other mineral matter.

Fresh-water desertic conditions are very favourable to the formation of fossil wood especially when a great deal of alkalies is present to decompose the silicates and liberate colloidal silica to be deposited in the woody tissues.

The presence of monocotyledonous fossil wood especially along the Pegu-Irrawaddian boundary seems to point to the climate of the Irrawaddian being a dry one in Central Burma and it may be that the uprise of the Arakan Yomas at the close of the Peguan interrupted the rain-bearing monsoon winds and established the dry rain shadow area which persists to the present day.

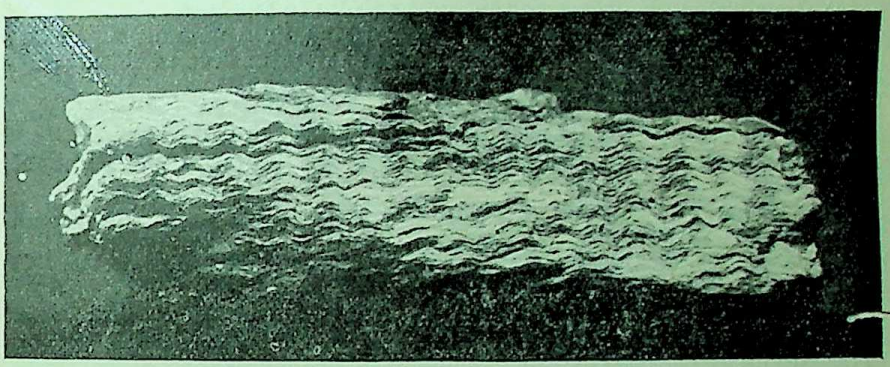

Fig. 1.

Photo. H. L. C.

Figure 1.—Showing the puckering and contortion in a specimen of fossil wood.

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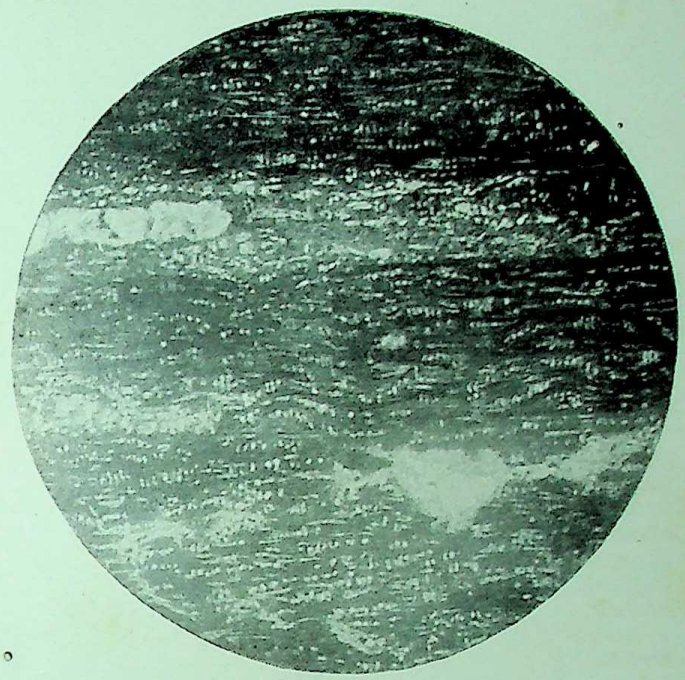

Fig. 2.

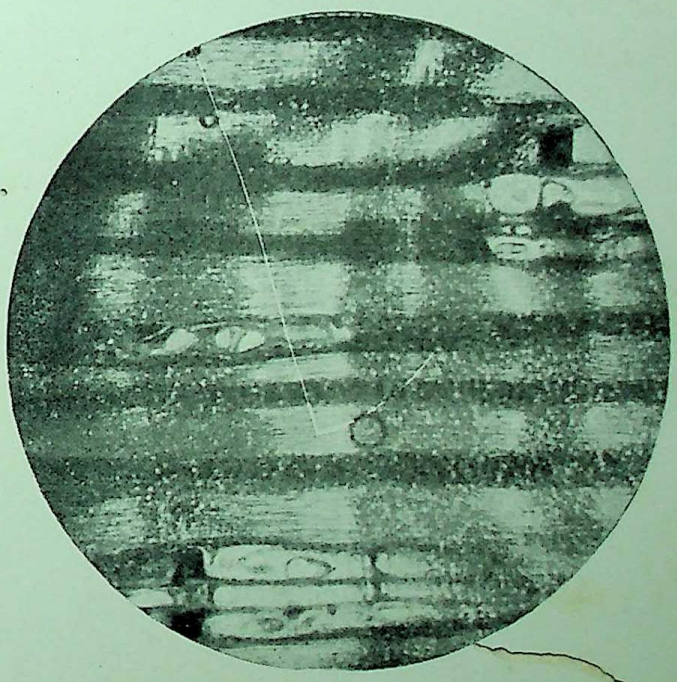

Fig. 3.

Photomicros, H. L. C.

Figure 2.—Showing the dicotyledonous character of xenolith of fossil wood found associated with the andesitic lavas of Mount Popa.

Figure 3.— Showing the broad vascular bundles and medullary rays in a dicotyledonous fossil wood, composed of white and yellow opal.

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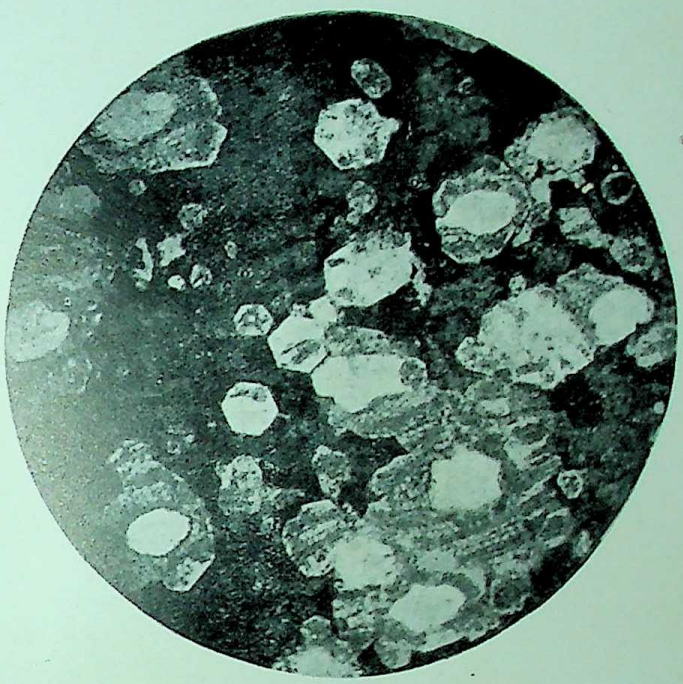

Fig. 4.

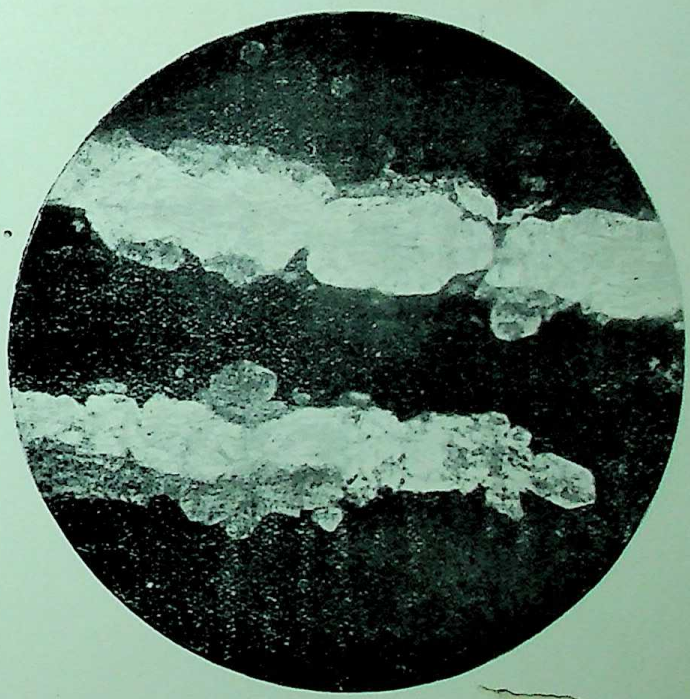

Fig. 5.

Photomicros, H. L. C.

Figure 4.—The transverse section of a monocotyledon showing clear quartz crystals deposited in the broad bundles of the vascular tissues. The dark portions represent the parenchymatous tissue replaced by siderite and clacite.

Figure 5.—Showing longitudinal section of the above. Mark the hexagonal, transverse and prismatic sections of quartz showing the zonal deposition of silica.

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A Few Types of Ho Songs composed by a Ho Teacher of the Chaibassa Zilla School.

By D. N. MAJUMDAR.

The songs contained in this paper are all from the pen of a Ho school teacher, now in the Chaibassa Zilla school. The ideas presented in these songs are quite familiar with us all but all the same, they indicate the mental outlook of the Hos, who have received some education in schools and colleges. The songs are generally sung by bands of young boys of Chaibassa and the neighbourhood and I am told that they have found access even to the interior of Kolhan. The Hos are classed as animists in the Census Report but a deviation in the procedure is now necessary in view of the anxiety of the Non-Christian Hos to style themselves Hindus. Besides, their regard for the divinities of their cultured neighbours, the Dikkus is not in any sense inferior to that of ardent followers of Hinduism. In one of the songs the goddess of learning has been invoked. Patriotism stands as the keynote to all the songs. The translations given here are mostly literal renderings and I am indebted to my aboriginal friend Babu Kanuram for the text.

(1)

नेलातावु हागा को, नेलातावु बिचारेया,
चिका लेका तेया तावु दिशुम रकावो।
सिउ आवु, बेपारावु, पाइटि आवु किलिमिलि,
ओल पाढ़ाओ एतोनावु, दिशुम रकावो॥

Come brothers, Come to think
To seek after the way to prosperity.
Plough, trade and take up various works
Let us be educated and the country will rise.

---

(2)

सरस्वती।

देवी सरस्वती विद्या एमतानी,
सनाम विद्या बुद्धि अदानी।

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जोहारम तानांय जोड़ा तौड़ी,
सबानाम किताब पोथी तौड़ी।

हंस दोयारे दुबाकानी,
बीणा बनाम साबानी।

मांगो हंसा तिंमे मागो,
ऊजुआ कानांय मुरण अमागो।

दुबाकान्ते अमा काटा सूबा,
एंडा तांय मेगा अज्ञान चूबा।

दुरांग पोथी नेएं ओले ताना,
अमा समानांग नेएम नेलेताना।

बुगि ओलोका, बुगि आयुमोका,
हो जाति कोरे दुरांग विऊरो का।

हातु तोंडांग कोरे दुरांगोका,
गाड़ा हासि बुरु गोंगो रुमुलोका।

तांय हागा बन्धु को एनोचाको,
रांसा बांसा दुरांग उपुटाको।

निरे निरे चाको, सेने सेने चाको,
उन्नति होरा रेको निरे सेने चाको।

मरा मराः कलम उनुम लेनोमे,
नूम सिहाई सूड ऊम लेनोमे।

अमा तुरुड़ा तेको एनोका,
बुगिन होरा तेको सेसेनोका।

पटना, २३. ८. २४.

OM.

SARASWATI.

Goddess Saraswati, giver of Learning,
Knower of all knowledge,
I salute thee with folded hands,
Thou who holdest a book in thy hand.

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Seated on the back of the swan
With 'Vina' lyre in thy hand
Be pleased with me, O Mother.
I have come to thy shelter.

I am seated at thy feet, my Mother.
Remove the dirt of ignorance from my eyes.
I am writing this, a book of songs.
Thou seest it in front.

Be it written well, be it heard well,
Be it sung about among the Hos,
In the village, in the jungles,
Let river banks, mountains, echo with it.

So that my countrymen, kinsmen, awaken
And rouse one another by singing these merrily.
Then let them run and let them march
On the path to prosperity.

Then dive thou thy quill pen
Into the inkwell black,
And rouse them by thy edged goad
So that they tread the path of virtue.

---

(3)

उठान पे।

(राग माघे)

दटिश्र नुम्बुल सूबारे,
सोबेनेको रुकुन तान, मेड को गोसोञ्चन तान।
दिश्रुम होको उटन ताना,
दिरि मुटु लेका जापे, गितिः गोजा कान।
नियातिंग गे सानांगा,
दिरि मुटु लेका जापे, गितिः गोजा कान।
बिद्या मारश्रुल होबाताना,
टोंर टोंर नाञ्चाव गेपे, ऊंडटिरे ताना।
दिश्रुम होको मरं ताना,
जोका रेयो जा नापे, कापे तेरेसान।

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दिशुम होको निरे ताना,
जुमांग सेसेन रेओ नापे, कापे सेसेन तान।
दिशुम होको रकाब जाना,
चिमिन काड़ लातार रेपे, बाटिया कान ?
लातार रेन को लाओ जाना,
तेगा कुलसुओ को, मारबु बुटाना।
मियाड बरियापे पाढ़ावकाना,
दिशुम हागा बुगिने दो, कापे बुद्धि तान।
पाढ़ाव दोपे, पाढ़ावकाना,
मी विता लाईगेपे, नासुलेन ताना।
नियातिंगे सानांगा,
मी बिता लाईगेपे, नासुलेन ताना।
काओ सेता तुयु बाना,
नेको गेचा लाइदोको, पेरेएन ताना।
मानवी होनपे जनमाकाना,
नेकोएते चिमिनेपे चेताना, काना।
नापन सुओडपे नुड़ताना,
दिशुम हागा बुगिनेदो, कापे नदान तान।
हो जातिं काजियम ताना,
दिशुम हागा बुगिन लागिड, मायंग तोलेन में।
जीडा कानो सुकुम सानां,
दिशुम हागा बुगिन होरा, नामगे सेसेन में।
हागांय ! सोमाय बोदोल जाना,
दामा दुमां सुसुन दुरां, नालोम रसिकान।
दिशुम बुगियो होरा नाम में,
दामा दुमां सुसुन नाखड़ा, नालोम नेकेलान।
नुइतानाम पुड़ पुड़,
डोयांग तांगार रे, नालोम चाबुड़ान।

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दिशुम रेया बानो उड़ु,
डीयांग तांगार रेम, हाम्बुडा कान।
दिशुमेरेम तिंगुन सानां,
नेडकन दस्तूर चोलोनेको माञ्चा नातु ताम।
सदरी कोयतेम सानांमान,
आयुस जस मे काजियमताना, देवगाम कानूराम।
नेडकन चलन मेना कान,
चेतान नेनेल रेदोम, बोदोले जाना।
राचाम दाचुम नाकी पानान,
सायोब दिकु जाकेडेको, पाडुए जाना।
धोती पिंदान सुनुम सोहान,
बंगाली दिकु जाकेडेको, बापारि केना।
विद्या गून मा बानो जान,
सूरबाञ्च लेका जाम, सोहान बानोयान।

दुम्बीसाई, मार्च १९२३.

Up! Up!

Under the British shade.

All are shaking off sleep and rubbing eyes;
The people all are rising,
But you are dead asleep like logs and stones.
Regrettable it is.
You are dead asleep like logs and stones.
Light of knowledge is dawning
But you are still snoring noisily;
The people of other countries are progressing,
But you do not advance even a little;
The other people are running fast
But you do not even creep forward.
All other people have gone up,
How long will you lie below?
Those below have gone ahead,
They trample upon us, so let us rise.
Few, few of you have light and learning
But are doing nothing for the welfare of your countrymen;
Though you are educated

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You are only gorging your small belly.
Regrettable it is.
You are only filling your small belly :
The crow, the dog, the fox, and bear
Their bellies, these, too, fill ;
You are born a human being,
Wherein, then, are you higher than these ;
You care for self only.
You know not to do good to your people and country.
You Ho people, I tell you—
Gird up your loins to do good to your people and country.
If you want to survive
You yourself walk on the path of doing good to people and country.
Time has changed, O Brethren !
No more engage in merriment by drums, dance and song.
Just seek after the road to your country's good.
No more toss your heads in dancing Akhara.
You are drinking leaf-cup after leaf-cup,
Drink no more out of big pots.
You have no thought about the country,
You are addicted to drinking ;
If you want to stand on the earth
Cut down and drive away evil customs.
If you want respect from civilized men
Listen to what Deogam Kanu Ram says.
Evil customs still linger in you,
Only your outward looks are changed ;
In cutting and dressing of hair
You have outdone the English and Dikus.
In wearing dress and using scented oils
The Bengalees even are outdone
But you have no learning.
You are scentless like the Palash flower.

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(4)

गुलाब बाड़ा ।

(राग माघे)

बकाड़िरे गुलाब बाड़ा, नेलते नेलते जीगे ह्याया,
मुतुडा मुतुडा पुटा ओकाना ।
बाड़ा लेना मुसिंगे, तेते लेडाय बारसिंगे,
चानाबेदो बपारि गोसोए जाना ।

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नियातिंगे सानांगा, सुसिं लागिड बाड़ा लेना,
चानाबेदो बपारि, मोएला जाना।
मोएला जान रेयो गेदा, मेन्दो मेताम नेरे मेना,
मियाड नेसु बुगिन गून, नेरे मेना।
देवगाम कबि जाकेडा, दुरांगे जोड़ाव लेडा,
नेया रेया गूने दुरांगे केडा।
गोसो जान रेगे, रंग सेनो जाना,
चेहरा बानोयनाजा, रो गोसो जान।
मेन्दो होयो काए मनातिं, नेन रोबायतेगे,
सुतुड लेकान सोहाने, नितिराकाडा।
नेले कागे मानव हनको, नेन होमो रूप दो,
अढ़ाई दिन लागिडेचा चमचमोआ।
जाम यतने रेयो, काल सेटेर लेन रेदो,
पेड़े गोसो पाताअ लेकाए गोसो अतुवा।
तोबे कांय मामारंगा, रूप योवन रेया दो,
निकिंयेदो चनाबेदो, काकिं नोरोंया।
मेन्दो नेन दिशुमेरे, बुगिन पाइटिंय रिकाया,
सदायगा टाइना, नुतुम सोहाना।

दुम्बीसाई, १. ३. २४.

THE ROSE.

In the garden the eye-bewitching rose
Is sweet to smell in its full bloom.
It opened and beamed bright for a day or two
But alas it withered afterwards.
Regrettable it is, for a day it bloomed
Only to fade away soon.
Though it has faded, there is still a treasure,
A good treasure left in it.
Deogam poet even composed this song
In praise of this treasure.
On having faded, its colour decayed.
Its beauty vanished away

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But still the wind from this dry flower
Spreads sweet perfume all over.
The same is the fate, O mankind ! of thy bodily charm.
It beams bright for two days and a half.
Take your utmost care, but when Death arrives
He leaves it withered, like leaves of a broken stem.
Then I will not be vain of my beauty and youth.
These do not guard me in the end.
But in this world, I will do good deeds.
'Tis the name that endures and emits scent.

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(5)

दिशुम सेवा ।

रिषि वंश रेबु जनमे लेना,
तरल वंश दोरे काबु नोलाडेया ।
बिषि नुके तेबु गोजो बुगिना,
रिषि वंश दोरे काबु नेलाडेया ।
नेडकन दस्तूर चलन कोबु,
बुटा रेड रेबु मा नातुइ गेया ।
दिशुम बुगिन नागिन धर्मजुड़ी,
धरम दसतूरबु चलावे गेया ।
नेंदे नूम नूबा सिंहभूम रे,
बिद्या मरशलबु जुले गेया ।
नेएहा पाइटी धर्म करम,
कर्त्तब पाइटी बु तुले गेया ।
नामेयाबु दिशुम बुगियो काजी,
साबिन हागा कोबु काजिक गेया ।
कर्त्तब होरा रेबु देआनेते,
बिदिशुम रेन कोबु गियुको गेया ।
सिंह लेका रुमुलेबु सबेन मुली,
गितियाकन हागा कोबु उटाको गेया ।

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नेला आबु ऊंडिनाबु जुड़ी नाबु,
उन्नति चुटा रेबु देए बापाड गेया।
सिंहभूमि हासा रेबु जनमे लेना,
सिंह लेकान पाइटिव् रिकाय गेया।
जनम नेंगा दिशुम नेलागा,
किलि मिलिबु सेबा सिंगारेया।

ता० १०. ६. १९१८.

SERVICE OF THE COUNTRY.

Born we are in the Rishi family,
Do not stain the pure line,
Better die by swallowing the deadly poison
Than forget thy noble line.
Bad habits and customs we must all
Uproot and then pass away
For the welfare of the country dear
Adopt the customs which virtue commends.
In the gloomy darkness of Singbhum land
Must we illuminate the light of knowledge.
This is the duty, the virtuous deed
Must we undertake by all means.
Let us find out a patriotic message
Then spread it to all brothers.
Then let us climb up the path of duty
And beshame the foreigners.
Let us roar like the mighty lions
And rouse to action our sleeping brothers.
Come, come, unite and assemble together
Must we climb to the zenith above,
Born we are on the soil of Lionland.
Must we act like the mighty lions.
Come, come, for the service of Lionland
To adore and adorn her with all that is good.

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(6)

चिरगलेनमें सिदायतेगे।

बाले सिंगि जुंगुड जेटे, जोमे नुइआ, बानो केटे;
बाले जीवन चिलिकन जिलाडन ताना।

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बानो होयो बानो गामा, बानो उड़ हियातिंग आमा ;
नेंगा नापु नुम्बल सुबा सुकुम दुबाकाना ॥

सिंगि रकाब जेटे केटे, जोमे नुइआम नामेम एटे ;
नेका गेदो, साबिन दिन, कागा सेनोताम ।
टेर अरिल होयो गामा, एटे मेआए हियातिंग सामा ;
नेका जूर, सदै जीवन, कागा सेनोताम ॥

चिरगलेन में सिदायतेगे, मायं केटे तोलेन मेगे ;
लगातिंग में, तालांग मर, दुकु दारोम मे ।
काम दारोम दारोमेदो, होंय मे आए बानरेदो ;
ओयार बोकोनेनते, दुख पारोम में ॥

पटना, २१. ८. २४.

PRECAUTION.

At sunrise the sunbeam is red,
There's no difficulty of food and drink.
Early life pleasantly glides on ;
There are no storms and no cares ;
You are merrily sitting under the parental shade.

With the rise of the sun, the heat becomes severe,
You are to earn your livelihood.
All days do not go in the same way,
Thunder, hail and storm and cares befall you :
Life does not always glide in this way.

Use precaution then from your early life.
Be prepared for the strife.
Set your face against difficulties
Or they will surmount you.
Struggle hard and swim across the ocean.

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Death and connected Ceremonies amongst the Hos of Kolhan in Singbhum.

Preliminary Review.

By D. N. Majumdar.

Birth, marriage and death are the three most important events of human life and afford occasion for the association of varied beliefs and rites and as such require well-meaning and patient scrutiny from all students of ethnography. And of these three principal happenings in one's life the last deserves the greatest attention. As soon as a child is born, he is ushered into a sphere of existence where he is received as a stranger no doubt, but he is expected to unfold himself with lapse of time and advancing years; so even if he makes his surroundings feel and enquire about his origin yet he causes no particular anxiety in the minds of his new acquaintances, because he has come to live with them and in their midst and is one of them who must identify himself with them. But different is the case at death; death means cessation of life, death means a parting irrevocable. The voice is hushed to eternal silence. So it is death which has evoked most of the rites of primitive people and consequently has contributed to the independent evolution of their ideas. Funeral ceremonies are said to be a department of religion and some authorities hold that religion owes its inception to the cult of the dead. Death brings into play the complicated processes of thought leading to the conception of powers higher than man, the idea of spirits pervading Nature, the transformation of soul into spirit and the behaviour of spirits towards the survivors. So it is to death that primitive rites were addressed and the first ceremonies were those of the dead and religion began with the cult of the dead.

Death is a surprise to the primitive mind as well as a source of apprehension. Surprise because a metamorphosis has come for which the primitive mind was hardly prepared and a source of apprehension because he is numbed by unknown fears. The Hos believe that death means a transformation, a metamorphosis. The soul leaves the body at death and is very loath to leave the place of death and is believed to hover round the dead body for a time. When the body is cremated the soul enters the vessel where the charred bones are kept for final burial at the family burial place at the next Jangtopa day and

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never leaves the house till the Jangtopa. With the burial of the earthen vessel under a stone slab, the disengaged soul enters the pit and remains in it as long as it pleases but it comes out by the small hole made by drawing out a thin thread placed in the vessel which will be described later on. Reincarnation takes place soon afterwards and the Hos believe that sooner or later the soul must re-enter the world in a new role. The soul never dies but changes frames. Death is caused by both internal and external agencies. Outdoor life affords any amount of accidents and death from these is to the Hos, due to the influence of spirits, who when annoyed cause accidents. There are beneficent spirits as well as maleficent ones. The former may again be subdivided into (1) those that are absolutely harmless (2) those that are prone to take offence; in the latter case, the spirits chastise the people. The first class of spirits, *i.e.*, harmless, elicit little or no rites for they being harmless can do no wrong. The second class of good spirits engage perpetual attention of the Hos; for they are regarded as the guardian angels of the people and most of the rites are reverentially offered to them. In case of non-observance of certain rites or periodical worship these spirits get annoyed and are wont to punish the devotees according to the nature or proportion of the breach. Spirits of persons dead, come under this group and on every occasion of worship, the Hos take special care to propitiate them. Of the maleficent spirits who are out to find out man's frailties the most important ones have been enumerated before in one of the papers published in the Society's Journal. These are like watchdogs always bullying the people. Sometimes they are avoided, sometimes they are satisfied by offering sacrifices. These spirits have their localities fixed so that the people keep themselves away from their haunts. But mere aloofness cannot save them from the grasp of the spirits, so, many of them are periodically propitiated. Spirits are believed to be disengaged souls and have been raised to the status of gods or demons according to the part played by them and understood by the people. Spirits who are directly concerned with everyday life of the Hos demand greater attention but they are not necessarily higher in their estimation. Spirits who are known to be connected with agrarian troubles, for example, are regularly attended to. Unworshipped gods, *i.e.*, gods who are absolutely harmless receive more respects from the Hos than harmful ones although they are particularly anxious to propitiate them. Of course, those that are benign gods are greatly honoured and are looked up to in case of emergency but seldom any rites are addressed to them for they are benign and are not expected to be displeased with their devotees.

Every soul finds a fixed abode after death which is allotted to it by Singbonga and the conditions of living in this new

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home are said to be ideal. They do not possess definite ideas about the position of this new abode but intelligent people amongst them like to place it in the nether regions. The period of its stay in its new home is determined by the anxiety of the soul to leave its mortal frame at the time of death or in other words, if the soul is loath to leave its earthly surroundings it has to come back soon ; but if it is anxious to leave this world and enter a new one the soul is allowed a longer period of stay in the new home. The souls of pious men as also of chiefs are not generally reincarnated but are transformed into stars and are hung up in the blue canopy of heaven and from there they shed their lustre on those they have left behind.

When the Hos were mere hunters, all deaths were attributed to the influence direct or indirect of spirits. Besides, natural deaths in a hunting tribe are rare, deaths being mostly due to accidents. Having no idea of the maximum period a man may live on earth, even natural decay was attributed to causes external to the body and influenced by the pleasure or displeasure of the bonga or bongas who are on the look out for men's defects. With the change from a hunting to an agricultural stage their outlook underwent a transformation and the inevitableness of death was impressed on their consciousness. But the mental plane was not, however, much raised and so we find even to-day, when epidemics sweep away the villagers, they approach the village Dewa or the medicine-men, who divine the cause of displeasure of the bonga or bongas concerned after which the whole village assemble in some convenient place, preferably under a big tree outside the skirts of the village, not very far away and offer sacrifices of fowls, goats, buffaloes, the offerings being selected in accordance with the gravity of the danger before them. After the ceremonial offer of sacrifice, the Dewa gets possessed and speaks out whether the spirit or spirits have been appeased or not.

As soon as death occurs, the female relatives rend the sky with loud wailings which summon the villagers in the courtyard of the deceased. Messages are sent to relations in other villages, who are also summoned to participate in the last rites of the bereaved family. They bring with them their own provisions, pieces of cloth, copper or silver coins whichever they can afford besides pots of ricebeer which are presented to the family of the deceased. The pieces of cloth and coins are placed on the funeral pyre, the presents are kept back. From the moment when death occurs to the last act of cremation, 'birdiring' or the horn of wild buffalo is sounded which with its solemn sound is believed to proclaim the wrath of the spirits. When most of the relatives and friends and villagers have assembled the elders put their heads together and decide upon a provisional programme. A wooden coffin is prepared, five cubits by two. one end of which is curved into a horses head. The

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corpse is then taken out of the hut and placed in the courtyard and the door of the hut is temporarily shut against the inmates of the house. In some parts of Kolhan the coffin is not now insisted. Next the village Deuri takes some arua rice in his hand and muttering some incantations scatters the same from the door of the hut to the courtyard where the corpse has been placed. This is believed to scare away mischievous spirits from entering the precincts of the hut and creating any mischief. The body is anointed with oil or turmeric paste, after which it is washed clean. The personal ornaments of the deceased if any, are put on the body and it is covered by a piece of new cloth but if the body bears tattoo marks, special care is taken to keep the marks exposed. This being done, quantities of rice, pulses and other seedlings are placed under the corpse by the villagers and distributed among themselves believing thereby that when these grains are mixed with other seeds at the time of sowing rich harvest is expected. The corpse is then placed in the coffin with the head towards the horse's head and is carried to the cremation ground amidst loud wailings of those assembled. They are also seen to tear their hair in grief. The funeral pyre has been kept ready from beforehand and the corpse is carried round it three times before it is placed on the pyre. The funeral pyre is always set fire to by the male members of the sept, the deceased belonged to, but at present the custom is to delegate the duty to the eldest son. The custom of hiring two widows for this purpose is found in Kolhan. Could this show that formerly the last rites were done by the hired widows ? This view has been stated by the aged inhabitants of Kolhan. The widows must be without any issue. In this connection it may be noted that the Hos are very bitterly disposed towards barren women and believe that those without any issue has secret connection with spirits and are therefore witches, and the Hos are particularly careful to avoid these women. But the custom of engaging the services of two such women at funeral rites admit of a different explanation. The women work as Dewas or medicine-men at a time when the family is always in a constant dread of unknown spirits; for they do not know whether the spirit just disengaged will be friendly to the survivors or will be a source of permanent troubles. From the time of death to the next Jangtopa day the widows remain in the house of the deceased and are generously treated by the members of the family and after the Jangtopa, when their services are no longer required, the two women are very handsomely paid. The dead are generally burnt at night and the funeral pyre is kept burning all through the night.

At dawn, the women cut two branches of peepul tree (*ficus religiosa*) three to four cubits long and fetch three to four pots of water from the neighbouring river or bandh. One of

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the branches is pushed straight home into the ground at the place where cremation took place and the second placed horizontally over the remains of the dead and water is poured from the pots on the spot. The charred bones which were kept aside, are washed and put in a 'hata.' or winnowing fan for future ceremonies. The party then retire to the village and the winnowing fan is carefully put in the sun for drying the bones. When in the afternoon, the bones are completely dried, a new earthen pot is procured, wherein the bones are kept. The pot is then covered with branches and leaves of Kend tree. The spirit is believed to hover round the vessel and the Hos place toothbrush and water near it to enable the spirit to use them (?). The pot is then made to hang from the thatch of the hut or placed in a corner of the hut. The party then go to a neighbouring stream or pool, anoint their limbs with oil and turmeric paste and take a purificatory bath after which they come to the deceased's house where they are treated with boiled rice, pulse, vegetables and handia by the members of the deceased's family. Of course, the bereaved family has not to undergo any expense for the entertainment as the visitors always come with their own provisions which are delivered to the housewife of the family and it is found that the receipt always exceeds the disbursement. When a child is born, the Hos observe pollution for a fixed number of days, during which the particular family is not allowed to mix freely in the community but at death there is hardly any such observance and the members of the bereaved family are under no obligation to undergo any penance. If there is any pollution it is a general one and all the members of the community have to share the same so that there is no prescribed observance at death. On the third day, the men or women who set fire to the pile of wood, cook a small quantity of rice with turmeric powder in a small earthen pot. The preparation is known as 'Sasanmundi.' A flat stone is placed in the courtyard known as 'Pauchaiti-diri' where the women wash their hands and feet by applying a quantity of Sasanmundi which is said to purify them. Next they spread out the Sasanmundi in a plate made of sal-leaf, which the Hos believe are much relished by the disengaged soul. The earthen vessel containing the charred bones is brought down from the thatch of the hut and is placed in the courtyard and near it are kept the bow and arrows of the deceased, but if the latter happens to be a woman, wooden seats with pots of water on them are placed by its side. At nightfall the kitchen is swept clean and ashes (rakh) are spread on the floor of the room. The male members of the family sit in the room and one of them begins to call by the name of the deceased.

"Ela Nutum Huju Singh Subarichi Daru Subare Mename
Hujume Sikuku Murmuriko Rabangjiareyajia."

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'Come spirit come, under the tree or wherever you are; there is cold outside, gnats insects in plenty; why remain there but come in please.'

The door of the room is carefully bolted from within and two women proceed to the cremation ground to fetch the shade of the departed. From the latter place, they start for the kitchen room. One of the women takes two plough-shares in her hands and the other carries a pot containing water. As they come, the woman with her ploughshares strikes these against each other and at every stroke the woman with water pours a quantity of it on the ground. The women then go to the spot where the vessel is kept and touching it with their feet approach the kitchen door. Here they address the inmates of the room whether the spirit has entered or not. They utter these words seven times and the members inside the hut at once light a *dip* and minutely examine whether any impression of any kind is noticeable on the ashes. As soon as any mark or footprint is discovered, the members inside cry out, "the shade has entered." If, however, after seven addresses by the women the inmates do not respond the women have to go back again to the place of starting and have to repeat the action.

When an impression is discernible on the floor, the members put their heads together to divine the cause of death. If the impression on the ashes resembles a long line made by dragging a piece of rope, it is believed that death was caused by the agency of the spirits of dead ancestors. If the traces resemble footprints left by lizards, they believe that Buru-bonga has killed the man. Marks resembling footprints of crab, indicate death at the hands of the tiger spirit. If it is death from the agency of mischievous witches the impressions appear like those of a cat's paw. If only holes are found on the ashes the man must have died from holes in his lungs, i.e. from consumption. When the mark indicates a thumb impression of a human being, death is believed to be caused by 'Jugnibonga.' After the cause of death has been thus ascertained, the members turn their attention to guess the form of life the newly disembodied soul wants to reincarnate itself.

It is not certain whether a spirit will reincarnate at all as man or as a living creature other than man. Sometimes it may not be at all reincarnated. Sometimes it may not deserve to be reborn as man, in that case the new role may be that of a bird or a beast of prey. The laws governing reincarnation are so vague and ill defined that it is yet premature to offer any explanation of the beliefs of present-day Hos. Of course, the longer we remain silent on the point, the more we run the risk of not getting at the truth for evidence of a rapid disintegration in their indegenous beliefs and practices are not wanting and as time rolls on, we shall be faced with a higher and more

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complex culture when there is a chance of our's being duped by ambitious minds who might question our motive.

The footprints of a bird are taken to indicate that the deceased will be reborn as a bird. If these resemble that of some animal, the spirit is sure to get itself reincarnated in the shape of that animal. If marks of a human foot are noticed the deceased is expected to be reborn as a human being.

In case the Jangtopa cannot be held on the fourth day as is customary, the ceremony is postponed by common consent till a convenient date and the bones in the vessel are provisionally interred in the courtyard with a small slab of stone on the surface. This is known as Jangkapari. As the Jangtopa is a communal ceremony it is also a drain on communal resources. So in many villages the rule is found that a certain day is agreed upon generally after the harvesting season is over, when the Jangtopa of all deaths in the village is celebrated. In case the Jangtopa is performed on the usual date that is on the fourth day after cremation, a general purificatory ceremony is observed by the villagers. They cut their hair, pare their nails and shave themselves. The floor of the huts is rinsed with cowdung solution which is also sprinkled on the courtyard. The women throw off earthen utensils and metallic ones are cleansed. The villagers then go to a neighbouring stream or bandh and take a ceremonial bath.

On the day previous to the Jangtopa, the villagers in a body go to a neighbouring hill and fetch a stone slab or Sasandiri. The size of the slab is large enough to require the services of hundred to two hundred persons. The proportion of the stone varies according to the social and material position, the deceased occupied in life. The more important the man the larger is the Sasandiri. The stone slab is brought down to the village and is placed in the courtyard of the deceased. If the deceased were a Manki or a Munda or an influential and respectable person, a second slab of stone 6 to 7 ft. in height and 18 to 27 inches in width is erected in a prominent place, preferably at the junction of two or more village alleys. These are generally of the menhir type, and resemble those of other aboriginal tribes of Chotanagpur.

The Jangtopa is generally held on the fourth day but if circumstances do not permit, it is postponed till the next harvesting time, to suit the convenience of the people. It must be noted again that the Jangtopa is a communal ceremony and the interests of the whole community is involved in it. The day being fixed in consultation with the elders of the village, invitations are sent to other villages and all relations and friends of the deceased make it a point to attend the ceremony; absence from this without sufficient reason is attributed to malice or antipathy to the departed soul. From all accounts, it seems that the Jangtopa is a happy performance and affords a time of

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enjoyment to all concerned. The whole village is astir with the news of the coming ceremony, there being no sign of grief or sorrow. The departed soul is believed to unite with the souls of the dead ancestors and the people assemble to celebrate the union. From the night preceding the Jangtopa, people begin to flock to the village in numbers, carrying with them presents of handia, rice, fowls and if possible he-goats. In the morning the men dig a hole in the family graveyard, five feet deep and three in diameter. When the hole is ready, earthen vessel containing the charred bones are brought out for burial. The vessel is then covered with flowers and is carried by two women to the hole. Before the final interment, the vessel is filled with rice and a piece of thread six to seven cubits in length is allowed to rest on the vessel, one end of the thread being kept on the surface. The hole is covered with earth and the burial is thus completed. Next, one of the widows gradually draws up the thread out of the hole and when it is done, on she runs with it to the hut where death had occurred. The thread device allows the spirit to come out of the hole, just covered. The Sasandiri is placed over the hole and oil is poured on it as also on the Sasandiris of the graveyard. The members of the family then scatter fried rice and prepare Sasanmundi which is offered in plates made of sal-leaf.

All the while, horns of buffaloes are sounded and the drums, "topam, topam, jangtopam" and a dance is held in honour of the departed soul. With the completion of the rites the people drink ricebeer and make up a procession, and the whole company parade the village dancing up and down the streets to the accompaniment of drums and music.

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Afghan Stories from the Lolab.

By Mrs. C. de Beauvoir Stocks.

When I was in Kashmir during the summer of 1926, I heard that the Khyber-Hazari—a people who had settled in the Lolab valley—were a Mongolian tribe who were also said to have the same mesobrachycephalic head-shape as the Lap-cha people of Sikhim. Thinking that they had possibly the same racial connection, I determined to go and investigate them.

To reach the Lolab valley, I had to cross the Wular Lake by 'dunga,' and then rode from Olus to Kumbrial. A camp was made on the side of a hill in a large deodar forest with a fine view of the valley stretching from north to south. This was three or four miles wide and roughly 12 miles in length. The valley seemed very fertile, into it several small nullahs opened, and up one of these, I came to Hihoram—the valley of the Hazari.

I found however that the Khyber-Hazari were not Mongolian at all, and therefore had no connection with the Lap-cha. In the photo of a group, they are seen to be a strong stalwart people. Muscular and big, they wore bright coloured turbans striped with either red, blue or green which added considerably to their height. They told me that round the village I was in, and all along that nullah, were rich 'kathi' (rice) fields. These had often been looted and plundered by a tribe that came from the Egistan country. On condition that they would fight the invaders, the Maharaja of Kashmir put them in the Hihoram valley, promising to give it to them should they be successful. The last invasion took place in 1907—and ever since, the people from Egistan have thought twice about invading this fertile land, where they had been so often defeated and imprisoned.

Their folk-tales—of which a few are given, show what a proud independent folk they are, they also relate a great deal of their own bravery killing tigers and leopards.

They do not work in their own fields, but employ Kashmiri labourers, whilst they merely sit and watch!

These people—the Khyber-Hazari—probably belong to the second group of 'brachycephal' that are sometimes termed 'meridionalis.' Their skin is of a medium brown, whilst their

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hair was usually dark, though the boy whose photograph is shown, had bright red hair.

The Khyber-Hazari is a Sunni-Muhammadan.[1]

Told by Wuffah da Khan. June 13th, 1926. At Hiho.

I have a field but I do not work as I am able to employ Kashmiri servants. I only hunt.

It was seven years ago that a leopard came and haunted this village. He chased and killed many people, and also robbed many homes of their ponies, cows and goats. Whenever, he was hunted however, he always managed to get away.

Several years ago, I had a fine big strong dog, and ever since the day I lost him I have had to put up with a much smaller one. This dog was unable to keep the leopard away from the village, he used to come and prowl round a cottage in the valley, and though we chased after him, he always got away.

Those were the days when Sir Hari Singh first became Maharaja, and it was the time of his wedding. All the villagers were invited to his nuptial-feasts, many Rajas were also present. One of us told the Court what was happening in our village, how the leopard was worrying them, and that they all wished he could be killed.

I told them that I had only a small dog, but if the Maharaja would only give me one, I would go forth and kill him. At last a Raja called Mahommed-Sama-Khan said he would give me one. I only had to go to his Palace to fetch it, and this I did with Gulam-Kurto-Khan.

That night we returned home, but found that the leopard had already been there and had carried away a dog. The next morning three of us went to find him, and saw him crouching under the fallen branch of a tree. Nearby lay the body of the dog which he had killed, and round him the snow was one foot deep. One of us three had a sword, but I told the owner not to use it, as we wished to fire at the beast, and only asked him to point the leopard out to us if he were to see him first.

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[1] Hazarajat the home of the Hazara—is in Central Afghanistan. This tribe is said to have descended from the Moghal Tatars who followed Chingiz Khan. The word 'Hazara' comes from the Persian and denotes 'one thousand.' It was used when the Tatar groups were divided into several 'thousands,' each one of whom was commanded by a chief. A regiment—the 4th Hazara Pioneers has been formed from a number of Hazaras who have emigrated into India; the chief reason of this emigration being their hereditary enmity with the Afghans, who have handled them with great ruthlessness invading their country and massacring them in large numbers. Hazaras in this regiment are all Shia Muhammedans.

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Two of us then shot at him but missed, and the leopard sprang up and ran away. He ran past the cottage which we had filled with men, and tore up the other side of the jungle.

That evening he came down again however, and went once more to the fallen branch. The three of us followed him and though I warned them all not to get too near the leopard who might spring on them and eat them, he heard us talking and ran away. Abdul-Mujed-Khan shot and hit him however, and as he was wounded we all ran up and hit him till he died.

Told by the same.

My grandfather Sadar-Samad-Khan lived here before me, and in his time nearby, at Baramullah, a lion was prowling. Lots of peasants ran away in great fear, and at last someone went to the Maharaja in Srinagar praying him to send some soldiers who would be successful in killing the lion. Five hundred of them were sent, and as soon as they had arrived, they asked the remaining villagers to show them the lion's lair. But the lion sprang upon them suddenly, alarming them so that some fell down in fear and died of fright whilst the rest ran away.

Then the Maharaja of Poonch came with another five hundred soldiers. He was named Mutasim, and ordered his men to tie up two goats as decoy. Each side of these goats were two tall trees, up each of which he put five of his men, telling them to shoot as soon as the beast appeared. However when it arrived, one man only fired, the remainder falling down in fright and being devoured. The others were so alarmed that they ran away in terror. The lion was left alone for three years and did much damage.

Then my grandfather—Sadar Samad-Khan—was approached, and was told by the Maharaja that were he to succeed in slaying the lion he would be rewarded by the gift of a fine large field in Hi-ho. So he went to Baramulla with a big Ladakhi dog, and after firing and wounding it from a tree he ran after it into the forest and slew it. After my grandfather visited the Maharaja, taking the skin with him but he asked for no reward, and received nothing save two gold bracelets. He stayed for seven days in the Palace, and then after presenting the two golden bracelets to his friend the Wazir, a Kashmiri—he returned home to Hi-ho.

Told by the same.

Once upon a time there was a fool, who started to fell a tree sitting on one of its branches. On this he first scratched the words: 'I am now cutting some wood,' but a traveller

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who happened to be passing, told him to be careful else he would fall. However the woodman said: 'You must be a fool, you are talking nonsense!' But he fell with the branch soon after, and catching up the traveller he said: 'You must be a God after all, for what you predicted has come true, tell me when I shall die.' The traveller replied that as he was not God, he was unable to tell him, but as the woodman continued to implore him, he at length said: 'It will be at the moment that you eat some peas!'

The fool returned home, and asked his wife what she was in the habit of cooking. She replied that sometimes she cooked chicken for him, sometimes meat and on some days cabbage. One day after feeding, he asked her what it was that he had eaten, and when she told him that he had just had some peas, he went into his bedroom to lie down knowing that he would soon die. Later his wife and his father came to call him, but as he thought that he was dead, he made no reply. Then they thought that the woodman must be dead, and as he was a Mohammedan, they washed him and dressed him in white cloth. Then they put him in a coffin and carried him to his jenaza (grave). There the mullah and all the men started to pray, and the fool became distraught, as he would be soon in his grave. Breaking the coffin he rose quickly tearing off his cloth, and the men, seeing this, thought that he must be a wizard who had come to life, and drawing their swords, they pierced him. Then finding him dead, they wrapped him up and buried him in the ground once more.

Told by Zuluf Ka-Khan at Hi-ho. June 6th, 1926.

Once upon a time there was a shopkeeper who lived in the country where Harun-Rashid was king. He was very well off for a shopkeeper, and had but one son. To his son he gave much money—sometimes even 10,000 rupees and this boy always divided whatever money he had with his friends who were much poorer.

One day the shopkeeper sold a great many goods, making lots of money, but dying soon after, his wife could not find the money, and told the son, that for the future he would have to live frugally, and would be unable to give any money away to his poorer friends.

But the boy still gave away a great deal, till at last his mother had to go out and beg.

One day, he was very hungry, and thinking of his many friends to whom he had often been so kind he went to ask for their help. But none of them would give him anything, and when he went to call on his great friend, he was told by the lad's mother, that he was not even at home. Then he

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returned home empty-handed, and his mother who had obtained rice from one of her poor friends—gave the boy some. This, however, he said he could not eat by himself, so he went and fetched three or four lads to eat it with him.

Now it so happened, that Harun-Rashid the king, took a great interest in his subjects. Every night he put on the clothes of a poor man, and walked about alone in the city to hear what was said about himself, and to know whether his people were contented.

One night he passed by the shopkeeper's house who asked him in saying: 'I am so poor, pray to God with me, that I may become king for seven days, then I will do, Oh! such an amount of good.'

The king (who was of course unknown to the boy), entered his dwelling to pray, and as there were three beds, he offered to spend the night there with his friend, who was in reality his wazir. When it was about two in the morning, Harun Rashid said to his wazir: "Come, let us carry the boy quietly away, he shall be king for seven days, and I shall see the good he does."

So they brought him asleep to the Palace, and when the boy awoke he discovered that he was in a fine big room, that was really in a king's palace.

A courtier came to tell him that his prayer had been heard, and that he should be king for seven days, when all his orders would be fulfilled. The boy listened attentively, and then gave orders that the lad who had once been his best friend, should now be put in jail and that much money was to be given to the poor, especially to his own mother.

Then after seven days, Harun-Rashid and his wazir took him back to his own home in his sleep. When he woke up he thought it had all been a dream, and asked his mother if he had really been king for the last seven days or not. She replied that he had, for he had sent her much money.

Then the boy's friend who had been in jail, wrote to Harun-Rashid asking to be let out, as he did not know what wrong he had committed, and the king gave him his liberty. At once he went to the shopkeeper's house, finding the boy who, he learnt had put him in jail, beat him severely, and took all his money away. So the shopkeeper's son was in great poverty once more, and had only the rice to eat which his mother begged from her friends, and which he constantly invited his friends to share.

Then one night, Harun-Rashid passed his door, and the boy, still not guessing that he was the king, asked him in to pray as he wished to be king for seven days once more, and the prayer had been so successful the time before. Harun-Rashid came in with his wazir, and as before, they carried him to the palace in his sleep. Later that same morning he

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awoke, and realising that he was indeed king he gave many commands. He ordered his old friend to be brought before him, and when he saw him he asked how it was he had escaped out of prison. The lad answered that he had written to Harun-Rashid who had given him his liberty at once.

The shopkeeper's son commanded that he should be returned at once and he and all his family were to be imprisoned at once for life. He also ordered money to be given to those who worked well, and those who idled their time away were to be fined. He then told them to fill his house with gold, until full and they should not be able to put in any more.

He performed many good deeds, and when the seven days were over, Harun-Rashid and his wazir took him back to his own home. When he woke up, he asked his mother if he had been really dreaming or not, and when she told him that he had filled the house with gold, he grew very delighted and helped his friends once more.

Told by Saiful-la-Khan at Hihoram village, June 12th, 1926.

Once upon a time there was a king who had one son, who was a Prince. In that town there was also a shopkeeper with whose son the Prince was very friendly.

One day these two went out hunting, but unfortunately they quarrelled. The shopkeeper's son was by far the best hunter, and large to boot, while the Prince was small and not half so quick. When they came back they would hardly speak to each other, and the Prince even told the king, his father, that the shopkeeper's son had beaten him. The king very wrothful, sent for the shopkeeper. When the soldiers came to his house, the shopkeeper looked out, and told them to wait for him, at that moment, he was, so he said, very busy. They became so angry that they looted the shop, took the shopkeeper with his wife and his son with his three wives and marched them to another country. They allowed the son a few minutes in which he could finish baking the loaves he said he was making. He made four and into these placed four precious stones he had succeeded in saving from plunder. Now none of the soldiers had seen him do this, and carrying them on his head and salaaming to the officer he marched away with the others.

They walked on until dusk, then one of the women turned to the boy and asked him to give her some money with which she would be able to buy some food. The shopkeeper, being told about the jewel in the loaf of bread, offered to carry it to the bazar where he would pawn it to buy flour with. Unfortunately he met a thief, who hearing about the precious

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stone and then seeing it, took him to his house, saying he would give him plenty of flour in exchange for it. But he only brought down two pounds, and when the shopkeeper remonstrated, said that as he was only a beggar, he would beat him and call the police were he to complain.

The shopkeeper moved sorrowfully away, and thinking two pounds of flour in return for the exchange of the precious stone was far too little and would only cause him shame were he to go back to his people—he went another way.

They were still very hungry, and the shopkeeper's son's eldest wife said: "I think that he has had the stone stolen from him, and thus feels he cannot return, let me take another of the loaves and go to the bazar, then I will pawn the jewel and return with some food."

The son however said he would go for her, and wandering about in the bazar, he arrived at the thief's house where his father had been. The thief said the same to him as he had to his father, but when he came out from his house again, he only handed him two pounds of flour.

This the shopkeeper's son took objection of, and asked for his ring to be returned to him, but the thief told him that the amount was well enough for a beggar—such as he was—and beating him hard, he drove him off.

The young man was frightened too of the shame that would come to him when he only handed the women the two pounds of flour, so he chose a road where he should not meet them.

Thus the four women were left alone, and still feeling very hungry, they decided that one of them had better try and get food by selling another stone. One of the young women wished to go, but the shopkeeper's wife said: "No you must not, you may meet with my husband or yours, and then they would be so angry that they would probably kill you, I had better go."

The older woman then put on her purdah and left. But she found the same thief and as he would only give her two pounds of flour, she fled in another direction.

So now there were only three women, and the strongest and eldest of them all volunteered to go with the last precious stone. Putting on a turban, and wearing a man's clothes she walked to the bazar and found the king's dhobey (laundryman). Talking to him she asked him how much he was paid were he to work the whole day. He replied that his pay was only one or two rupees daily. She then said: "If you don't do any work for him, I will give you ten rupees." She told him then to show her his house and to make hot water so that she could bathe. He was also to bring her some fine clothes. The dhobey gave her some of the king's clothes, and when she had donned them, she told the dhobey to accom-

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pany her walking, as she was obliged to go out and interview a man. She happened to pass a great many horses, and one of them, she noticed seemed finer than the others, and was harnessed with rich gold mounts. Asking the price she was told it was 10,000 rupees. Mounting it, she gave instructions to the dhobey to pay the owner 20,000 rupees, this amount he had not, so the girl-wife who now looked like a prince rode on until she came to the house of the thief, who had stolen three precious stones of theirs. She demanded the thief to give 20,000 rupees to the dhobey, and thinking it was the king, the thief obeyed.

Then the Prince sent the dhobey with fine clothes to fetch her two wives. (These two women were really the wives of the shopkeeper's son whom she had left behind.) When he returned with them, the Prince made the thief's house beautiful, and told them to live there, as she would provide them all with food and clothing.

Every morning she rode past the king's palace, the best looking building in the city, which had towers and minarets, and one day the king enquired who it might be. The servants tried to find out, but all they could discover was that it was a Prince who, with his two wives, had taken the rich shopkeeper's bungalow.

The king sent for the shopkeeper and asked who it was who had taken his house. He was unable to answer, but thought it must be someone from a great distance. Then the king commanded that he should be brought to the palace.

Now no one knew that, in reality, the Prince was a woman. She came to the palace, making great friends with the king, who allowed her to be seated, and, hearing 'he' was a king's son, give her hundreds of rupees and many costly presents.

One day a hunter, a Gujar, came to the palace craving audience of the king, as he wished for help to be given him in the killing of a leopard, that came every night to his village, carrying off whatever he could find, women and children. The king asked his courtiers if they could go, but they all made excuses, and each suggested the other going. In wrath the king turned to the Prince asking if he could give his help. She replied: "But it is my duty and pleasure to do anything that you command." The king said to his courtiers: "Listen to what this Prince says, I ask you to do something, and you have known me long, yet you excuse yourselves, but the moment I wish for assistance, this Prince comes forward and offers me his aid."

The Prince, guided by the Gujar, made her way to the village, and finding the spot which the leopard visited every night, she climbed a tree, and waited for the beast. The leopard came in the night, and by dropping her sword on it, the Prince managed to kill it. In the morning as soon as it was light, she cut off the beast's ears and tail, putting

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them in her pocket and went home. But meanwhile the Gujar had gone to the Palace and had told the king that it was he who had killed the leopard.

When the Prince appeared with her story, the king was angry, but believed her when she produced the ears and tail, giving her much more money.

Then the king commanded his wazir and a hundred men to go to the Prince's house to see how it really fared with him, and if his two wives were beautiful. The Prince, overhearing this order, told a silversmith in the bazar to send her a golden mug and a hundred silver ones.

When the wazir and his hundred men arrived at the Prince's house, they met the dhobey, who was now the wazir, who told them that they would be obliged to wait for the Prince who was now in his harem. He gave them all tea to drink saying: 'Our rule is that you are never to return your cup, but are expected to take them away as a memento.' After he fetched food for them on silver plates saying after to the bearers: "Throw these plates away now, as they are dirty and we shall not use them again." Then as the wazir and his men thought of taking leave he turned to them saying: "The Prince will not come out this afternoon you will see him to-morrow in the palace." With that they had to be content and returned to the king. When he saw them he wanted at once to know how the prince fared and if the two wives were beautiful. The wazir replied that the Prince seemed to be more wealthy than the king himself, but they had not seen his two wives, so the king would still have to imagine their beauty. Everything had been better and more wonderful than anything they had ever seen.

Then the king said they must see the two wives, and the next morning, the wazir instructed the gardener's wife to present them both with a basket of flowers. But as each wife took a flower up out of the basket to smell it, she threw it away, and further astonished the gardener's wife, by filling each basket with clothes and giving her money, saying: "As we are in a strange country, we cannot do as much for you as we would like."

In great excitement, the woman went back to the palace telling the king that the Prince's two wives were more beautiful than his queen. This made the king greatly desire them, and he told his wazir that he now wished the Prince to die, so that he could possess his two wives. The wazir told the king to command the Prince to go to a neighbouring country to fight for him. They started on the morrow and as soon as they had come to a large open plain, the Prince asked the soldiers what pay they received. When they told her, she gave each man 10 rupees telling him to return to the palace and to slay their own bad king. This they did, and later the Prince returned staying in the palace and becoming king.

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Knowing the thief to be a crafty man in the bazar, the Prince made him wazir, and one day donned a blanket and sat in sorrow in a corner of the Palace, knowing his wazir would come and speak to him. When he did so, the Prince said: 'Why ask me what my sorrow is, it is too great to tell any man.' Then however he showed him his one precious ring, and told the wazir to find him three more like it, as he had two wives for himself, and there was also the dead king's queen who had none. 'If you do not,' he said, 'I will slay all your sons.'

The wazir-thief became very sorrowful as he knew he would have to return the three rings he had stolen. and after he had pondered for a week, he brought them to the Palace. The Prince looked at them and said: 'Call all the poor people together outside my Palace, give them food and then call me to interview them.'

So later he stood in the big gateway, and holding the rings in his hand, he caused all the people to pass one by one before him. When the shopkeeper who was his father-in-law passed, he could not resist uttering an exclamation. 'Oof!' he cried, and likewise his wife when she passed. These were at once placed in custody by the Prince's orders, and when her husband came in turn he cried out: 'Oof!' and was also arrested. The next day, he ordered them to be given fine apparel and to be brought to the Palace with the firing of guns. He told the shopkeeper he was now a king, and conducted the wife into the sumptuous harem. Then the Prince shewed him *his* two wives and asked if he knew them. The shopkeeper was too ashamed to admit his own foolishness, though he recognised them as his son's wives, and when the husband came the Prince taking off her turban said: 'And do you not know who I am?' At last he had to admit his wrong, and lived with her and his two other wives happily ever after.

Told by Said Khan at Kholan Qom. June 18th, 1926.

There was a leopard once at Drug-mullah. Three men were out shooting pheasants (Jocunda) when they saw him sitting on a stone in the distance. Though his gun was not large enough, one man fired at him, only wounding the leopard who sprang at him. One of the other men then seized the leopard by the hair as he was jumping, and the third one shooting, hit the man instead of the animal. Then one of them managed to catch him by the head and sitting on it till the leopard threw him off, he called to the others to fetch some more help. Someone else came with a hatchet, and managed to drive the leopard away. The next morning about four o'clock, they all returned to the same spot, and seeing the leopard lying there, they thought he was dead, one taking him by the tail. But he rose suddenly, terrifying them all, and ran away. Then

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all the folk wrote to the police in Handuar saying that a leopard lay always in the jungle near the village and attacked people who went daily to fetch wood. One policeman came bringing with him three Khyberi men. These then went up the hill taking several dogs with them and having the policeman in their midst as he said he wished to see a leopard killed. The dogs caught hold of the beast and attacking it with swords they killed it, and Thandar, the policeman, took the skin away.

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A Khyber-Hazari group in Hihoram valley.

Saiful-la-Khan.

Profile.

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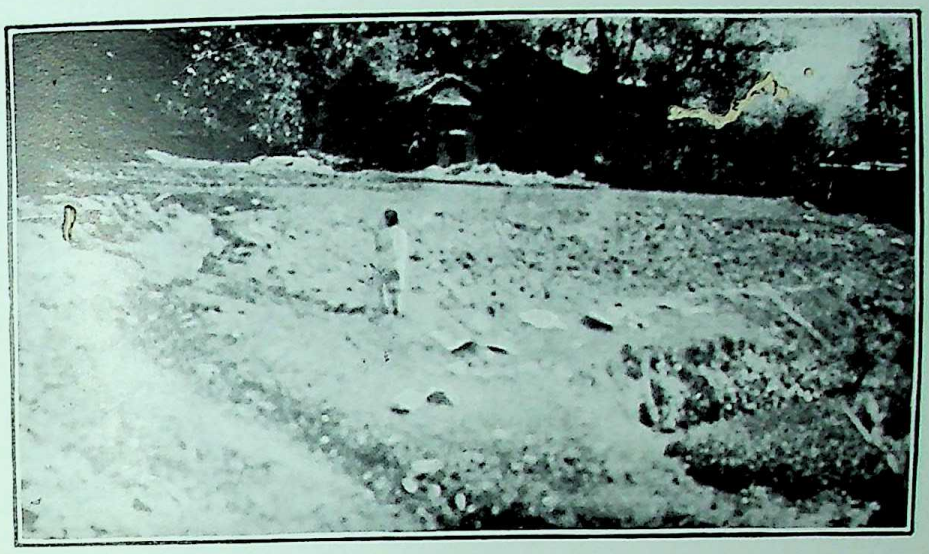
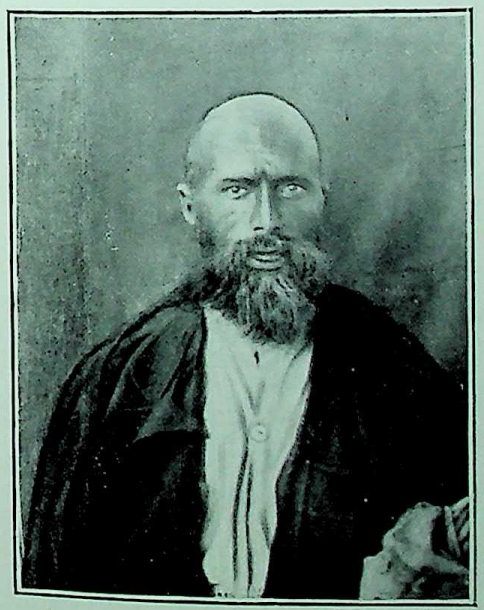
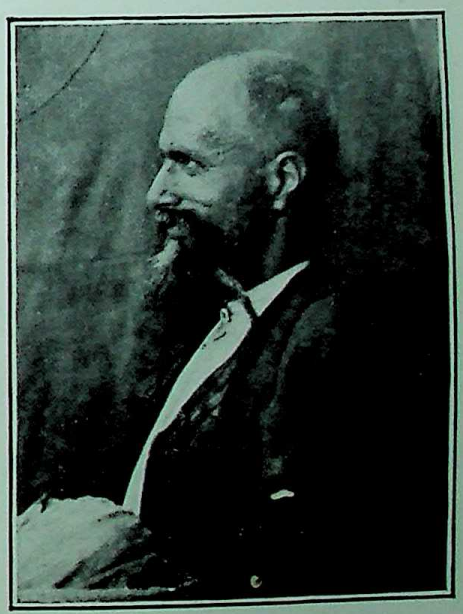


A Khyber-Hazari's house at Hiho.



Wuffan-ka Khan.



Profile.

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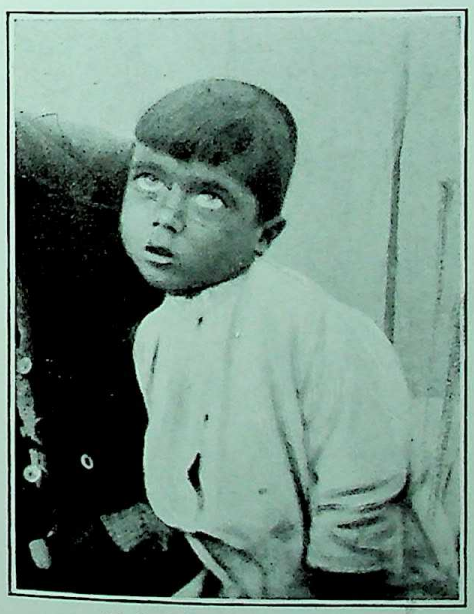
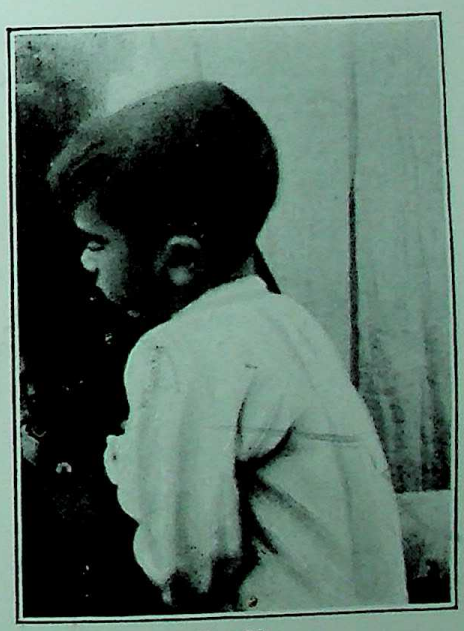
A Family group at Hiho.



Zuluf-ka-Khan's son.



Profile.

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Fr. N. Pimenta's Annual Letter on Mogor. (Goa, Dec. 21, 1599.)

From the Latin by the REV. H. HOSTEN, S.J.

The following passages on Mogor are taken from *Historica Relatio de India Orientali*, a long Annual Letter addressed by the visitor, F. Nicholas Pimenta, S.J., to the General of the Society, Fr. Claudius Aquaviva.

The letter of the visitor is dated from Goa, *Oct. Cal. Ian. in die festo S. Thomae Apostoli Indiae Patroni, Anno 1599.* This date suggests two remarks. First, the 8th day before the Calends of January (Dec. 25) cannot coincide with the feast of St. Thomas, the Apostle and Patron of India, that feast falling on Dec. 21. We may take it, therefore, that the real date is the feast of St. Thomas, Apostle, 1599, or the XIIth, not the VIIIth day before the Calends of January. Secondly, though the letter bears at the end Fr. N. Pimenta's signature, it was not written by him, at least not the end of it, but by a secretary, unless we suppose that Fr. Pimenta ante-dated it, for on the 13th of December 1599 he left Goa for his visit to the Portuguese towns north of Goa: Chaul, Bandora, Batti, Bombay, Tana, the houses of Salsete, Bassein, and Daman.

We have made our translation from the Latin text in Father John Hay's *De Rebus / Iaponicis, / Indicis, et / Pervanis epistolæ / recentiores. / A Ioanne Hayo Dalgattiensi Scoto Societatis IESV / in librum vnum coaceruatæ, /* Antverpiæ, / Ex Officina Martini Nutij, ad insigne dua-/ rum Ciconiarum, Anno M. DC. V. /

Fr. Pimenta's letter was translated into Latin by an anonymous translator;[1] from what original language is not stated. I have lying before me photographs of portions of the Latin MS. text,[2] which was printed, but I cannot say whether the MS. is in Father Pimenta's writing. His next annual letter (Goa, Dec. 1, 1600) in Fr. Hay's edition was translated from the Italian by Fr. John Busaeus (Buijs).[3]

St. Joseph's College, Darjeeling, Sept. 30, 1919.

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[1] As stated in the index at the end of Fr. John Hay's edition, Antwerp, 1605.

[2] The MS. text is in the Society's possession [Goan. Hist. 1539–1599, II (Goa, 32)]. The portion photographed for me contains foll. 691–699. And I remark at once a curious discrepancy of dates between the text printed by Fr. Hay and the MS. The letter of Fr. Francis Fernandes from Syripur in Bengal is dated 16 Cal. Febr. 1599 in the printed text, which is wrongly made to correspond with Jan. 14, 1599 (instead of Jan. 17, 1599). January 14 would correspond to 19 Kal. Jan., as the MS. has it.

[3] There are curious discrepancies between Fr. John Busaeus' Latin

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[P. 795] In the Northern part of this province,[1] which, God willing, I have decided to visit this year,[2] everything connected with the Mongolic mission is prospering and gives us no small hope of the coming harvest. As all these matters are lengthily treated in the Annual Letters from that Mission, I shall here reduce them to a few heads and speak of them briefly.

Among other things which force us to direct our attention to the Mongolic Mission, the chief one is that Achebar, commonly called the Mogor King, granted us a diploma allowing us to preach the Gospel in the Kingdom of Cambaia. Fathers Anthony Machado and Peter Paes have been selected for this Mission.[3] The news gave much pleasure to all generally who are eager for the spread of the Christian faith, but especially to the Archbishop of Goa, who to further this enterprise gave them his faculties, which in India are very ample. The results expected from this mission concern not only the spiritual welfare of the Portuguese, but the salvation of the heathens as well; though wonderfully attached to certain superstitious practices, they will not be less devoted to the true Religion, when converted. But, as usual, the enemy of mankind raised up many difficulties, which have hitherto delayed the Fathers' departure; but, when with God's help these will have been removed (and we hope they will be removed shortly), they will continue the journey they have begun. Meanwhile, the divine goodness has not failed us. Inspired from above, a certain influential Portuguese, who is a trader at Cambaieta (the Metropolis of Cambaia) promised to supply the Fathers with everything necessary; and this will appear less wonderful, since even some gentiles, called Baneanes, who are merchants, also promise to give ours their assistance.

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translation in Hay's edition and a Latin MS. (translation ?) of the same letter, still in the Society's possession, of which I have before me photographic facsimiles of the portions referring to Bengal and Pegu (foll. 59 b-67 a). First, my photographer has added on his own authority the following note: *P. Nicol. Pimenta, Goana Hist. 1600–1624* (*Goa 33*); *Litt. Ann. 8 September 1602*, where remark the discrepancy of date. Secondly, my MS. not only differs in the wording, but is also longer in some portions than the translation printed by Fr. Hay. The Mainz edition, '*Exemplum Epistolae*,' (1602), which Sir E. D. Maclagan seems to have summarised (*J.A.S.B.*, 1896, pp. 81–83) contains the same text as Fr. Hay's edition.

I have published an English translation of the Latin MS. text on Bengal and Pegu, but not, as I had wished, the Latin text itself, in *Bengal Past and Present* (*Journal of the Calcutta Historical Society*): "*Jesuit Letters from Bengal, Arakan and Burma* (*1599-1600*)," Vol. 30, July–Sept., 1925, pp. 52–76.

[1] The Province of the Society called 'the Goa Province.'

[2] The visit began on Dec. 13, 1599, when Fr. Pimenta left Goa for Chaul.

[3] of Cambay.

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The second point is that about the kingdom of Xatai, which stretches far eastwards, we have many things which seem to require some new Mission. Xatai (as many think) is what ours call Catai.

[P. 796] Fr. Jerome Xavier writes about this kingdom in a letter dated the seventh before the Calends of August of the year ninety-eight of this century.[1] His words are :—

"While I was speaking with the Prince,[2] a certain Mahometan merchant, sixty years old, entered the Palace; and, when asked by the Prince whence and by what way he had come, he answered, he had come from Xatai by way of Mecha. Others, who knew him, presently stated that at Mecha he had spent a hundred thousand gold pieces (*aureorum*) in alms. The Prince asked him whether that was true. He did not deny it, but said that, if he had given such a big sum, it was because he was old and would soon die, and because surely he knew he would not be able to take his money with him after death. Questioned about the condition of the kingdom of Xatai, he answered as follows : He had lived thirteen years in that kingdom, at the town of Xambalù (Cambalù, as ours call it), the king's Court.[3] The king of it is very powerful, his dominions counting as many as one thousand five hundred towns, very many of which are extremely populous. He had often seen the king, he said, but no one is allowed to address him except through a written petition, and he answers people only through a eunuch. When the merchant was asked how he had penetrated into that kingdom, he answered that he had gone as a merchant and ambassador of the king of Caygar.[4] At the first city he had been stopped by the magistrate and had been asked who he was and what he came for; when finally the seals on the letters which he carried were found to be genuine, a courier had at once been despatched to the king and had come back within a month bringing the permission to proceed. This could be managed easily by frequently changing horses, as the custom is, so much so that they cover ninety or a hundred coss (*cossos*)[5] per day. A coss is equal to an Italian mile. No one

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[1] July 26, 1598.

[2] The Father had a conversation with the Prince on July 25, 1598; but it appears from the narrative that he met the Muhammadan traveller on a previous occasion.

In a letter from Lahore, Aug. 2, 1598, to Fr. Thomas de Ituren (Spain), Fr. Jerome Xavier refers to the conversation with this Muhammadan as having taken place "eight days ago."

[3] Khānbāligh was Pekin; but the Fathers did not know this yet. van Linschoten wrote at this time: "In the land lying westward from China, they say there are white people, and the land called Cathaia, where (as it is thought) there are many Christians, and that it should confine and border upon Persia." Cf. *Hobson-Jobson*, s.v. Cathay.

[4] Understand : Casgar=Kashgar.

[5] Read : 'cossas,' for *kos*.

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molested him on the whole journey; for they have a strong sense of justice and show no mercy to robbers. He said the people are of a white complexion, with handsome features and long beards. He had not seen anywhere people so handsomely built; even the Rumis or Turks were inferior to them in this respect. As for their Religion, he said they are Isavits (*Isauitae*),[1] that is Jesuits (their name for Christians being derived from the name of Jesus, as we derive it from Christ). When asked whether all were Isavits, "Not at all," he replied. "Many among them are Mussavits (that is Jews; their name for Moses being Mussa). Besides there are many Mahometans."

"Is the king a Mahometan?" queried the Prince. "Not yet," he said, "but the Mahometans hope he will be soon." To please me, the Prince told the old man to come back after some days. But I went to see him before the day appointed and questioned him again about the law and religion of that nation. He asserted they were Christians [P. 797] and that he had lived in familiar intercourse with many of them. They had many Churches, some of them being very big; [in them] were many images, both painted and carved, especially the Crucifix, to which all showed the greatest reverence. Each Church had its priest, whom the people highly respected and to whom they offered gifts. I asked him whether they had a Bishop. He did not well understand what I meant; however, he said that among them there is a Priest higher in dignity than the rest. The Priests were celibate; they had schools, instructed children for the priesthood, and were all of them maintained at the king's expense. The king built Churches and repaired the old ones. "The Padres (*Patres*)," he said, "wear black vestments and hats not very different from yours; only they "are bigger. They do not take off their hat when saluting; but, "joining their hands on their breast, they raise them to their head. "They also use mantles (*palliis*), and they have also red vestments "which they keep for feastdays and more solemn occasions. "The other inhabitants generally wear black, except on feastdays when they put on red." He said he had often seen the king going to Church, as he is a Christian; there are moreover many persons of both sexes living a celibate and, so to say, monastic life in buildings removed from intercourse with the world, while others follow a celibate life at home, within their own houses. The people are very rich, and there are many silver mines. The king hides his treasures in the chief towns, and possesses four hundred elephants, which they say are brought from Malaca. He affirmed that many merchants arrive there by sea from Pegu, which (I should think) cannot be otherwise than by the sea between China and Japan (*quod Sinas & Japanios interjacet*); and he said that the voyage generally lasted six

[1] From *Isāī*, a follower of Jesus.

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months. Such is the summary (says Xavier) of what that merchant told me.

"I should think that the easiest way of all to undertake that journey would be to make use of this King Achebar's help: for, on starting from Lahor, one comes first to Caximir,[1] a kingdom of the said Achebar. If from there you go straight to the kingdom of Rebat,[2] the king of which is a great friend of Achebar's, you will easily, with letters of introduction from him,[3] reach the city of Caygar;[4] from there to the first city of Xatai, the inhabitants of which are Christians, there are only a few miles. While I was in Caximir, I was also told that there are many Christians and Churches with priests and Bishops in the kingdom of Rebat. I wrote to them from Caximir by three different ways,[5] both in Portuguese and Persian; when they answer, I shall let your Reverence know.

"From Lahor, the 7th before the Calends of August, of the year 1598.[6]

After this, Achebar went from the town of Lahor to the city of Agra, three hundred miles from Lahor, and [P. 798] he marched against these Decanic, or southern, kingdoms with a large army, and so much display that to carry the king's belongings and tents eight hundred elephants and seven thousand camels were scarcely sufficient. This will not appear surprising when it is considered that the king's secretary[7] alone required seven hundred camels and seventy elephants for his baggage. Father Manoel Pinheiro (*Emmanuel Pinerius*) remained at the Church of Lahor. Father Xavier and Brother Benedict Goes accompany the King. As they offered of their own accord to follow him on the journey and be at his service, the king embraced them lovingly and told them to take with them money, horses, camels, elephants and whatever else they wanted. They said one camel was enough. "Let them have two," urged one of the courtiers, one of the king's favourites. "Give them whatever they like," rejoined the king. So the king's servants made them accept four. This expedition of king Achebar has created much consternation among the neighbouring kings; they consider they have good reason to fear this move of their most powerful neighbour. While the king was at Agra, he sent his son with fifty thousand men against the Decan and the lands of the Melique (*Meliquii*),[8] in which lands is the town of

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[1] Kashmīr.

[2] Understand: 'Tebat' or Tibet. Cf. Yule, *Cathay* (1866), II. 535 n.1.

[3] From Akbar? From the King of Tibet? [4] Casgar=Kashgar.

[5] *Tribus viis*; the corresponding expression in Portuguese would mean rather 'in triplicate.'

[6] July 26, 1598. The Fathers write generally 'Lahor,' with 'Lahore' as ablative.

[7] Abu-l Faẓl?

[8] The Melique was the thanadar of Dabhol or Dabhul, a little south of Chaul. Cf. H. Heras, S.J., *Ind. Antiq.*, LIII, 1924, p. 35 n. 15.

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Ciaul[1] (Chaul, as ours write), not more than two hundred and ten miles from Goa. When this son died lately,[2] he appointed in his stead another son,[3] to whom he gave his sword and forty thousand gold pieces for the expenses of his journey. But, though these matters are seriously to be commended to God, let us pass on to return to our missions.

Fr. Jerome Xavier wrote again about the affairs of the kingdom of Xatai from Agra, on the Calends of August of the year 1599,[4] saying he had discovered that what he had written lately about the Christians of the Cataian empire was correct. "As for the road," he writes, "some think there "is one by Bangala, namely, through the kingdom of Garagata,[5] "the limit of Achebar's kingdom; they say, however, that the "easiest way is through the country of Cabul and the city of "Lahor; but this road is somewhat longer, although frequented "and commonly followed by merchants." In this same letter the Father reports the conversation he had with the King about this mission. It was as follows: "Lord King, our Superior has been told that there are very many in the kingdom of Xatai who follow the Christian religion. Now, owing to the distance and the wars in the countries lying between, we Europeans have been unable these last three hundred years to get any reliable information about them.[6] He wishes very much to send thither three priests, or at most four, to help those people in the keeping of the divine law; for it is according to our vocation to travel to any part of the world, never minding the danger, and to show to mortals the law of eternal salvation and the path to life immortal. The king answered: [P. 799] '*Rahat met Xodà*,'[7] that is 'May the blessing of God be upon you,' to which he added some other words in praise of us. Thereupon, I said that Your Reverence had learned that there was no safer and more frequented road to that country than through the kingdom of Achebar himself, and that you wished

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[1] 'Ciaul' would be the spelling suiting the Italian pronunciation. The translation by an anonymous author was probably made from the Italian. The translator may have been Portuguese, if we judge by the addition '*nostris Chaul*,' where *nostri* would mean, 'we Portuguese.' Cp. however: Xatai—is what ours call Catai (p. 795 *supra*); Xambalù (Cambalù, as ours call it)..(p. 796 *supra*).

[2] Sultan Murād died near Daulatābād, 22nd Urdībihisht 1599. (Elliot, VI. 9.)." (Note by Sir E. D. Maclagan, *J.A.S.B.*, 1896, p. 80.) "In May 1599, Prince Murād died of delirium tremens." V.A. Smith, *Akbar*, p. 271. V. A. Smith (*ibid.*, p. 458) follows Beale's date: 15 Shawwāl 1007, *i.e.* 1-5-1599. Who is right?

[3] Prince Dānyāl.

[4] Aug. 1, 1599.

[5] Ghoṛāghāt.

[6] J. Xavier must have read of the medieval missions in China and Tartary.

[7] "Rāḥat az Khudā or Raḥmat-i-Khudā?" Note by Sir E. D. Maclagan, *J.A.S.B.*, 1896, p. 80.

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to know whether, if some of ours were sent thither, it would please his Royal Highness to help them on their way.[1] 'Let them come,' said the King. 'I am about to send thither an ambassador; they will go with him.' This is surely a splendid opportunity; for Achebar lords it far and wide from Cambaia up to Cabul. From there one goes to Badaxam,[2] the King of which lives in Achebar's lands[3] and whose three sons were our pupils; their brother reigns there now. In this way, with Achebar's help, it is clear that ours can go to the frontiers of Cataia; with letters from him, there is no place which they cannot pass through." Thus for Xavier.

The third point is that the Father spoke to the King about the permission which I asked him, to send other Fathers who would join those residing at Lahor and Agra. He agreed willingly to my request and ordered to draw up at once a diploma, which would be of help to the Fathers going to Cataia and to those who would remain there.[4] In the very diploma he directed that at the town of Cambaia the Fathers should be given whatever they would require for their journey. The Father writes that, when the diploma is signed, he will send it on to me.

I think it will not be unwelcome to your Paternity if I add here the discussion which the Father had with the King on the 17th before the Calends of August of the same year.[5] He said to the King that with his permission he wished to speak to him on a matter privately. The King, having moved a little apart and dismissed the bystanders, remained standing and asked him what he wanted. Xavier, who for two years previously had received instructions to this effect, began as follows: "Sire, "we have received the following orders from our Superior. 'As "'it is now the fifth year since you began studying the lan- "'guage, the King can now doubtless understand you thoroughly; "'wherefore, now beseech you his Royal Highness that, having "'called us to him to acquaint him with the Gospel, he should "'now see how he stands, so that I too may know what order "'to give concerning you.'" "In truth," said Xavier, "it is "very irksome to us to stand idle. Why, sire, do you not "listen to us as you said you would? It was meet that you "should listen, since you profess yourself a diligent searcher

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[1] In the *Nova Relatio*, Mogvntiae, 1601, p. 176, we have: "*qui Regis auxilio illuc contēderent*" (to go thither with the King's help).

[2] Badakhshān.

[3] He was then at Akbar's Court.

[4] There: *i.e.* in Akbar's dominions.

[5] July 16, 1599. This conversation must have taken place at Agra, since Xavier wrote still from Agra on Aug. 1, 1599. Cf. p. 798 *supra* of this letter. The portion following, up to the end of the paragraph, is translated in Sir E. D. Maclagan's article in *J.A.S.B.*, 1896, pp. 80-81. We follow it, with a few unimportant changes.

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"after truth." "I admit," said the King, "that I called you "in order to hear the truth, so that I might adopt whatever "course appeared most consistent with truth and reason. But "now I go towards the Decan. I shall halt near Goa, and "there I shall manage to find time and listen to you at "leisure." He continued the conversation for some time, repeating the same language. "I called you for that," he said; "I shall speak to you and listen to you in private. "What? When the Mahometans [P. 800] were rulers, did "any one dare to say that Christ was God? They put him at "once to death. Now everything is safe." I agreed that this was so, and thanked the King, saying that, if he would listen to us some time, it would be of the greatest benefit to him as well as a very great consolation to us. He promised to do so and closed the interview.[1] Thus writes Jerome Xavier.

I shall now send some companions to help and console the Fathers, for I doubt not that God is pleased with their services in cultivating this field. Indeed, God enlightens some to convert them: others he softens to that extent that they boast less now about their sect and conceive daily a better opinion of our law.[2] This year at Christmas[3] the Fathers at Lahor made a magnificent crib in memory and honour of Our Saviour's birth: to which thronged so great a crowd of all ages and classes that for twenty days continuously some three or four thousand persons came to worship the image of the Child Jesus.[4] One of these, a nobleman, whose wife had borne him a son the same day and hour as that on which Christ was born, offered him at the crib, and allowed him to be baptised, himself and his wife becoming catechumens. Not so blessed was the fate of another Mahometan woman, though that of her new-born child was still more blessed. First with her consent, and then at her request and entreaty, her child had been baptised; but,

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1 "It has been suggested by Bohlen (*Alte Indien*, I. 105) that in his refusal to adopt Christian views Akbar was influenced by the report of the cruelties of the Inquisition at Goa, and Prince Frederick of Schleswig Holstein (Noer, *Kaisar Akbar*, I. 486) has repeated the suggestion, but I do not find anything in any of the records to show that he had heard of the Inquisition." Note by Sir E. D. Maclagan, *J.A.S.B.*, 1896, p. 81 n. 1.

2 The rest of the paragraph appears in translation in Sir E. D. Maclagan's article (*J.A.S.B.*, 1896, p. 81).

3 Not the Christmas of 1599, since Fr. Pimenta's letter is dated the 21st December, 1599; but the Christmas of 1598. And, since the 'Fathers' are mentioned as at Lahore on that occasion, the question arises whether Akbar and Xavier moved to Agra before or after the Christmas of 1598. V. A. Smith (*Akbar*, p. 271) makes Akbar go from Lahore to Agra 'late in 1598.'

4 The meaning is that the crowd was so great as to oblige the Fathers to leave the crib exposed during 20 days, from three to four thousand persons coming daily to see it. That would mean in 20 days some 70,000 persons. The year before (1597) there had also been a crib at Lahore; it had been exposed till the octave of the Epiphany, or 20 days.

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unable to bear the mockeries and taunts of her neighbours and relatives, she poisoned it in her resentment, on the eve of Ascension Day,[1] by mixing poison with its milk. The poor child after seventeen hours of terrible torture bore testimony to Christ, not in words, but by its death, and expired before the altar, on the feast of the Ascension, forty days after its birth and eighteen days after its baptism. Father Manoel Pinheiro[2] wrote that, after the child had surrendered its soul to Christ, its face shone with so unwonted a grace that the glory of its blessed soul, which it had attained on rising to Christ, appeared to be reflected on its features below.....

[P. 808] Some have left for the kingdoms of Achebar, some for the kingdom of Cambaia, but they are still waiting in neighbouring places, only the Viceroy's consent being still wanting.[3]

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1 Ascension, 1599. 2 '*Emmanuel Pinerius.*'

3 The last paragraph is a detail added by Fr. Nicholas Pimenta, the Visitor.

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Fr. N. Pimenta, S.J., on Mogor (Goa, 1 Dec., 1600).

Translated from the Latin by the REV. H. HOSTEN, S.J.

From:—*Exemplvm/Epistolae P./Nicolai Pimentae Provin-/ciae Orientalis In-/diae Visitatoris/ad/Admodvm R.P. Clav-/divm Aquavivam, Prae-/positum Generalem Societatis/ Iesv,/ De Statu Rei Christia-/nae in India Orientali Calendis De-/cembris Anno 1600. datae./Excvsvm primo Romae/apud Ludouicum Zannetti 1602./ Nvnc vero/Mogvntiae apvd Ioannem/Albinvm, Anno Eodem.*

Our translations go without omission from p. 3 (the beginning) to p. 29 inclusively. A few other passages are added, so as to include all the matter pertaining to the West Coast north of Goa and to the Mogul Empire.

The book states on the verso of p. 113 that the Latin translation was made from the Italian by I.B.S.I., *i.e.* Joannes Busaeus, S.J. The Italian edition would be Zanetti's of Rome, 1602.

St. Joseph's College, Darjeeling,
13. 8. 1926.

[P. 3] Copy of a letter by Fr. Nicholas Pimenta, Provincial of the Province of East India, to the Very Reverend Father Claudius Aquaviva, General of the Society of Jesus, dated the Kalends of December of the year MDC. [=Dec. 1, 1600.]

Last year, 1599, I wrote to Your Paternity about the success of my journey to the Southern parts of this East India[1] and of the various missions of ours sent thither. Now I shall relate my visit to the Nothern parts, and I shall touch especially [P. 4] on some points which happened this year, one thousand six hundred.

So then, I left Goa on the 13th of December [1599] with eleven companions distributed in two ships, and we reached safely the port of Ciaul[2] on the 2nd of January [1600], without having been attacked by any pirates. At Ciaul we met nine Industan youths, whom Fr. Emmanuel Pinnerus[3] had sent from the town of Lahor *viâ* Sind. Another had joined them, who among them is regarded as very noble (because descended

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[1] In 1598-99. "P. Nicolaus Pimenta, Lus." left Lisbon in 1596, (*Franco*).

[2] Chaul. 'Ciaul' would be the spelling of the Italian edition.

[3] "P. Emmanuel Pinheiro, Lus." left Lisbon in 1591 (*Franco*).

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from Mahumet),[1] and who more than once had strenuously fought in defence of the Christian religion. But, some Mahumetans were so hostile to him on the way, and related to him such absurdities about the Portuguese, that he changed his mind and returned to his Lahor. Of these nine young men we left four at Bandora,[2] in order that they might be taught by the best Masters every kind of musical instruments for the new Church of Lahor. A fifth entered our Society in the College of Santa Fè,[3] together with another young man of rare talent, who had [P. 5] tried to study the Alchoran at Mecha itself and had learned a good part of it by heart; nay, some Sarracen (*sic*) merchants had already eagerly engaged his services, in order to hear him expound the mysteries of the Alchoran. But, thanks to the zeal and industry of a Portuguese nobleman, he surrendered the Alchoran into the hands of ours and willingly bent his head to receive the holy waters of baptism. The said young men relate many things about the progress of Christianity in addition to what Fr. Pinnerus noted in his letters. The following appear to me not at all unworthy of mention.

A Brachman youth, still a catechumen, chanced to come among pagans, when one of them started talking thus: "My good man, we wish very much to know from you what sort of law the Fathers preach, whose disciple you say you are." He answered to the best of his power, and very well, and added finally this declaration: "Brothers, I wish you to know that there is not in the world any law more true than ours, for it alone opens to man the gate to eternal happiness."—"How can you say anything about that," they rejoined, [P.6] "since you are a Brachman?"—"I do not deny," said the catechumen, "that by birth I am a Brachman; but now, with the grace of God, and as far as depends on my will, I am altogether a Christian!" One of them, stung by this answer, said very angrily: "You, Christians, deserve to be called Cafares!"[4] that is, men without law.[5] And while the young soldier of Christ laboured hard to refute this calumny, lo! the impious calumniator was struck with a brick (*latere*) on the head, and fell to the ground. Not a little astonished at this tragic accident, the other infidels looked very carefully everywhere for the culprit, suspecting that it was someone bribed for the purpose by the catechumen, but they found nobody. Hence, it was not doubted but that it was the vengeance of God.

When I had sent the rest to Bazain, I started from Ciaul

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1 A Saiyad?
2 North of and near Bombay.
3 At Goa.
4 *Kāfir*: infidel.
5 Without religious law.

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REFRENCE BOOK

for Bandora with Fr. Jerome Cotta, my companion.[1] At Batti[2] we found unexpectedly a Brother[3] with a ship, on which we passed together to Bombain,[4] where, at the mouth of the river, a great number of Christians suddenly appeared. They came in pinnaces (*?lembis*), bearing [their] banner and every kind of military equipment (*omni instrumento militari*),[5] [P. 7] surrounded our ship and delighted us greatly with their varied display. However, what gave us most pleasure was to see such a large number of Christians, and among them many young men, sons of Moors, like roses plucked from thorns. I visited the house of Tana,[6] and all the other houses of the Salzete part (*orae*), together with the College of Bazan (*Bazaniensi*),[7] where, as Your Paternity directed, I selected for the Seminary[8] some young men conspicuous for good birth and character to be trained in letters and true piety, so that one day they may devote themselves to the conversion of the infidels. I began this important work on the feast of the Purification of the Most Blessed Virgin Mary,[9] after a sermon, and a solemn procession which terminated at the door of the Seminary.

The clergy, the nobility, and all the people wished to honour with their presence the feast of the College of the Purification, for the College took that title for no other reason than to be always under the protection and patronage of the Most Pure Virgin. The schools gave their dramatic per-

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1 "P. Hieronymus Cota, Cast." left Lisbon in 1583 (*Franco*).
"Hieronymus Cota, Lus." left Lisbon in 1599 (*Franco*). As the latter is not mentioned as a priest, there appears to be question of the former. Fr. Jerome Cotta died in 1600. Cf. this same letter, p. 118: "In the Northern part the Lord, who vouchsafed life to many [an allusion to Fr. Pimenta's own escape from drowning in 1600], took from among the living Fr. Jerome Cotta. After a long illness at Daman and Bazain, repeating the voyage to (from ?) Ciaul, though broken in health, with a Father and a brother, he passed—with that peace which was always his in life—from this sea of misèries to the heavenly haven. Odoard de Melo, the Prefect of Diu, to whom (to which ?) the Father was adjoined, had the body placed in a coffin and carried with honour to our house. He himself followed the funeral."

2 Not identified; the two Fathers must have gone by land from Chaul to the extreme point north, along the coast, until the shortest way to Bombay and Bandra was across the sea.

3 Not necessarily a lay-brother; but one not a priest.

4 Bombay, corrupt for Mombaim, from Mumba-Devi or Mayambu. Cf. Yule, *Hobson-Jobson*, 1886, p. 77.

5 As visitor of the Jesuit Missions, Pimenta would be received with much honour wherever there were houses of the Society. No popular demonstration was complete without its salvos of artillery.

6 Thana, up the Thana river, in Salsette Island.

7 Bassein.

8 Of Santa Fè, Goa. We hear further that Pimenta went back from Daman to Goa with three young men from Portugal and Daman, candidates for the Society of Jesus. The young men from Bassein must have been another party, sent to Goa soon after being selected.

9 Febr. 2, 1600.

यह पुस्तक वितरित न की जाय
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formances (*dramata sua*), drawing much applause from the delighted spectators. [P. 8] At the Vicar's request,[1] there was added to the public lectures the explanation of cases of conscience, for ecclesiastics little versed in this study.

At Daman, the pupils of the schools acted a tragedy in my honour (the first Latin one in this town), and they played so well that it might have been shown with credit even at Goa. It was, indeed, wonderful how, within two years from the opening of the school, they could give such a remarkable exhibition of their talent. What is to be esteemed still more, is that, in addition to the study of letters, there flourishes among them such ardent piety to God and the neighbour. With my own eyes I saw with much pleasure how they vied with one another in carrying various alms to the poor detained in prison. These good young men were not a little moved thereto by the excellent device of a certain youth of Goa (now our pupil (*alumnus*) and scholar at the College of Santa Fè). Having engaged himself as a soldier on the fleet of the North, he managed so eloquently to move so many of his comrades to confession, and brought so many of them, and of the çitizens too, to the feet of the priests [P. 9] that it was as on the days of Holy Week.

While I was at Daman, Fr. Jerome Xavier[2] (who with Brother Benedict Goes[3] follows the court of the Great Mogor King) sent me a letter through some Christians, together with a book written against the false sects of paganism, and especially against the Mahumetan sect, which he has dedicated to the King himself. The title of the book is 'The Word of Life' (*Lignum vitæ*).[4] It is a very long work, and, according to me, very erudite. He is now actively busy in translating it into the Persian tongue with the help of some of the ablest scholars in that language. Indeed, the said Father has already made such progress in that language that the Persians themselves take pleasure in hearing him talk, and all but admire the propriety of his vocabulary and the choiceness of his diction.

The Mogor King has extended so far in every direction the

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1 A secular priest, depending on the Archbishop of Goa, and the chief ecclesiastical dignitary in the place.

2 "P. Hieronymus Xavier, Navarr." left Lisbon in 1581 (*Franco*).

3 Bro. Benedict de Goes was received in India in 1583. See on him C. Wessels, S.J., *Early Jesuit Travellers in Central Asia* (1603–1721), M. Nyhoff, The Hague, 1924, pp. 1–41.

4 Fr. Bartholomew Alcazar, S.J., *Chrono-Historia de la C. de J. en la Provincia de Toledo*, Pte 2, p. 216, calls it *Fountain of Life* and says there was also a compendium or summary of it. We must note that the original was, apparently, not Latin, but Portuguese. I take it that the *Lignum* or *Fons vitae* is different from the *Mirror of Holiness, i.e. Mirātu-l-Quds*, or the Life of Chîst, but identical with the *Mirror of Truth*. I have here, however, only de Backer, *Bibl. ... de la C. de J.*, VII (Liége, 1861), 413–415, to refer to.

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boundaries of his empire that he is now quite close to these parts of India. He led into the field a very numerous army, one of a hundred thousand men, partly cavalry, partly infantry, and more than a thousand elephants. He has already crossed the Gatte,[1] picking his way through mountains so rough and woody that not seldom [P. 10] the whole day was spent to cover the distance of a gunshot. His lieutenant (*vicarius*) [the] Xanâcana[2] precedes him at the head of another fifty thousand men. Lately he took a very strong citadel of the kingdom of [the] Melique,[3] and cast the young King into chains. Now he is measuring his strength against the Idalcan,[4] and though he leaves no fortified place behind him, he has not yet come as far as the town of Berampur,[5] on the frontiers of Cambaia. Omican,[6] the king of it, hearing of the approach of such large forces, suddenly abandoned the town and betook himself to a fortress which nature and art have made impregnable.[7] This fortress is situated on an immense mountain measuring fifteen miles in circuit; and, so our Brother Goes[8] writes, it is supplied with more than three thousand big bombards, which, when fired, sound as loud as thunder. Ours are employed in the functions of the Society. They have a portable Church,[9] wherein they say Mass and perform solemnly the other divine offices, the turmoil of that great Babylon not ruffling their peace.

As Father Pinnerus is six hundred miles [P. 11] away from Fr. Xavier (for that is the distance between Lahor and Berampur), I thought of giving him as soon as possible a priest or companion, both to console him and to help him in a mission which promises very well certainly. I sent him Fr. Francis

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1 The Ghāts, properly 'passes' in the mountains; here the range of the Western Ghāts.

2 "Prince Dāniyāl and the Khān Khānān were charged with the duty of taking Ahmadnagar. Internal dissensions precluded the effective defence of the city, and Chānd Bībī, the only capable leader, was either murdered or constrained to take poison. The town was stormed without much difficulty in August 1600, and about fifteen hundred of the garrison were put to the sword. The young king and his family paid the penalty for their crime of independence by lifelong imprisonment in the fortress of Gwālior." (V. A. Smith, *Akbar*, 1917, p. 272.) In this case the Khān Khānān was Abdurrahīm Mīrzā (*ibid.*, 266). The date of the fall of Ahmadnagar is set down as 19. 8. 1600 (18 Safar, 1009), *ibid.*, p. 458.

3 From the Arabic *malik* (king). The name is found applied to many Indian princes by the Portuguese. Cf. Yule, *Hobson-Jobson*, 1886, p. 823; Dalgado, *Gloss. Luso-Asiatico*, II. 48-49.

4 From 'Adil Khān, a title given by the Portuguese to the Muhammadan dynasty of Bijapur, their kingdom being called by them Balaghat.

5 Burhānpur.

6 This represents the Portuguese 'O Miran,' the Mirān, *i. e.*, Mirān Bahādur Shāh of Khāndesh. Cf. V. A. Smith, *Akbar*, 1917, p. 275.

7 Asīrgarh.

8 A former soldier, Goes would naturally dwell on such points.

9 A tent (?). Akbar had a portable mosque in his expeditions.

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Corsi,[1] and told him first to meet Fr. Xavier, who would be able to instruct and direct him properly in everything. He writes that he landed at Cambaia at the beginning of March.[2] While awaiting there a suitable opportunity to continue his journey to the army, he employed himself fruitfully in preaching, explaining the Catechism and hearing the confessions of the poor faithful, who received him like an angel dropped from heaven: for they had no one there at the time to lead them in Christian piety or nourish them with the holy Sacraments. While here, he received from Banians letters-patent obtained for ours by Fr. Xavier from the Great Mogor, on the strength of which they could travel safely to Graa [Agra], Lahor and Catai [Cathay].[3] Moreover, the Governor of Cambaia,[4] who was about to go to the King's court, offered to take him in his company; but the Father declined the offer [P. 12], because his Superior had ordered him not to leave the place until he had received an answer from Fr. Xavier. "By no means," objected the Governor. "Take the money required for the expenses of your journey." And, as the Father had decided not to accept anything, the Governor left him in the care of the Vice-Governor, his son. Finally, he started from Cambaia and after various incidents and adventures reached the court safely,[5] as Your Paternity will hear from his letter of the 12th of May,[6] which I here subjoin.

He writes: "Not far from Cambaia five hundred nomads (*exules*) had laid an ambush to us, but we escaped in a wonderful way out of their hands. It happened, indeed, that the Chief and leader of the nomads was forced to conduct us safe to the town of Sambusar,[7] a two days' journey. For, as he had by chance entered Cambaia to spy out the time of our departure, the prefect of the town, and Sultan Hamet, the military chief in Cogi,[8] ordered him to be in readiness (*praesto esse*) and

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1 "P. Franciscus Locce, Sard." left Lisbon in 1599 (*Franco*). "P. Celso Ital." left Lisbon in 1584 (*Franco*). One would not suspect Corsi under one of these names. Cf. *Journ. Proc. Asiat. Soc. Bengal*, 1910, p. 540.

2 March 1600. The details about Cambay must come from a letter of Corsi's written before leaving Cambay.

3 Cathay was then supposed by the Jesuits of Mogor to be distinct from China and to contain remnants of old Christian Missions. Fr. Ricci of Pekin had already found out, however, at this time that Cathay and China were the same.

4 We hear of the Governor of Cambay; the Vice-Governor, his son; the Prefect of the town; and Sultan Hamet, military chief in Cogi. To what extent are all these titles distinct? Pimenta's letter of the next year (1-12-1601) speaks of Akbar's ambassador at Goa, the Governor of Cambay, Cogequy Soltaõ Amad (1601).

5 The camp of Akbar at Asīrgaṛh. Corsi's letter of 12-5-1600 could not refer to his arrival at Asīrgaṛh; his letter of 4-8-1600 did.

6 12-5-1600. 7 Not identified.

8 *Ab vrbis praefecto, & Sultano Hamet belli duce in Cogi.* This

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to conduct us with his own people to Sambusar. When we arrived at Sambusar, the prefect himself [1] with a hundred horse and some elephants joined and protected them [2] for nine miles [P. 13], and, on retiring, gave [them] twenty horsemen and as many footmen to conduct us to Baroch.[3] There we received Fr. Xavier's letters, and we learned that all the roads had been occupied by an enormous body of nomads; but the prefect of Cambaia,[4] on his return from the Court, routed them with terrible effect, killing five hundred of them and taking ten elephants. So, I hope we shall be able to prosecute the journey we have begun; yet, all our hope is in the God for whose sake we exposed ourselves to all the dangers of this expedition."

In another letter of the 4th of August of this year [1600], he writes thus: "On the 4th of June, I arrived safely, through God's providence and mercy, at the army of the Great Mogor.[5] To accompany us on the way, we had a thousand escopet-bearers, nearly all on horseback, whom the Mogor had assigned to Meira [6] Mustafar, the son of the king of Guzarat.[7] Merchants and others, to the number of four thousand, had joined them. At a distance of three days beyond Berampur (*triduo inde à Berampur*) [8] they were attacked by a thousand enemy horsemen; but they fell on them, and routed them all, slaying one hundred. The victory was due in great part to an elephant of ours, [P. 14] whose fierceness and dash completely disordered the whole cavalry of the enemies. As soon as we arrived at the army, Fr. Xavier, Brother Benedict, and very many Christians [9] came to meet us, and the same day we were all brought into the King's presence. The only thing I am now looking forward to, is a convenient opportunity to start for Lahor. Meanwhile, I devote myself heart and soul to the study of the Persian language." Thus far Fr. Francis Corsi's letter.[10]

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makes two persons. I suspect that Cogi stands for Cutch, properly *Kachchh* (cf. Yule, *Hobson-Jobson*, 1886, p. 222), and that 'Cogequy' Soltaõ Amad is Soltaõ Amad 'of Cutch.'

1 The 'prefect' of Sambusar.

2 Do we not expect 'us'?

3 Broach.

4 This appears to be the Governor of Cambay who invited Corsi to come with him to Akbar's court. He had not waited for Corsi, evidently, and was now on his way back by the time (12-5-1600) when Corsi wrote, no doubt from Broach, or from some further stage in his journey.

5 Asīrgaṛh.

6 Mīr?

7 Son of Muzaffar Shāh, whose suicide in 1593 ended the Gujarāt campaign? (Cf. V. A. Smith, *Akbar*, 1917, p. 248.)

8 Burhānpur.

9 Note the presence of these Christians, doubtless European mercenaries, in Akbar's camp before Asīrgaṛh. Within Asīrgaṛh there was "the chief commandant of the kingdom, one Abexín [Abyssinian], a very valiant captain, and seven other captains, white men, who—although they belonged to the sect of the Moors—were descendants and grandsons of Portuguese." (H. Heras, S.J., *Ind. Antiq.*, LIII, (1924), p. 36.)

10 When Fr. Corsi states in 1628 (cf. *Mem. A.S.B.*, V (1916), p. 133) that he came to Mogor in February 1600, we must understand this of his

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During my journey in the South,[1] I often thought seriously of establishing a Mission at Diu, both because we had been lately invited thither, and because ours had not been in those places for a long time past, and it seemed to me I could not in conscience overlook this matter, since the place is better suited than Goa to penetrate into the kingdoms of Prester John.[2] Accordingly, as the departure of the fleet afforded a good opportunity, I sent thither Fr. Gaspar Soarez[3] and Brother Melchior Perez,[4] who writes from there, as also the Prefect of the place[5] and others, that a permanent residence of ours is much desired there. It is true, the said Father could have gone from there to Ethiopia, on board a ship which was ready for the purpose, but the journey was not safe, on account of the watchfulness of the Turkish forts, [P. 15] as I too had told him.

I shall not omit saying (for it is worth saying) how Satan tried to ruin this mission. Like a dog at the chain, he barked at it furiously, but could not prevent it. On leaving the College of Daman and setting out to embark, Fr. Gaspar[6] suddenly felt his feet so torpid that he could not walk without moving his companions to utter pity. Some people attacked on the way the Indian who carried in a basket the Father's provisions. When we got on board,[7] a soldier—I cannot say for what wrong—wounded the Commander grievously, so that the fleet did not leave and we returned to the College. At the same time, some one who went to Bazain[8] to bring the Father's writings broke his leg, and there was so much delay that he did not find the Father any more.[9] At Bazain Fr. Peter Paiz[10] was appointed as this man's companion; but, on the way to Daman, he got a kick from a bullock (*à boue*) and had to take to bed. (P. 16) He too now could be of no use to us or arrive in time to accompany the Father. However, he embarked in another ship, which closely followed after the fleet; but, on the day when she left port and gained the open sea,

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departure from Daman. Fr. Pimenta was at Bassein on 2. 2. 1600. "The very week when Fr. [Gaspar] Soarez left for Diu, and Fr. Francis Corsi for Lahor" (p. 16 of this letter), Pimenta was nearly drowned in the Daman river. Soarez arrived at Diu on 26. 2. 1600 (p. 21) and Corsi at Cambay in the beginning of March, 1600 (p. 11).

1 In 1598-99. 2 Of Ethiopia.

3 "P. Gaspar Soares, Lus." left Lisbon in 1591 (*Franco*).

4 I do not find Bro. Melchior Perez in Franco.

5 Did the Prefect of Diu write to that effect? Cf. pp. 25-26, *infra*.

6 Fr. Gaspar Soares.

7 Fr. Pimenta, then at Daman, made it a point to see the Father off.

8 South by land, a big distance. 9 *Sic.*

10 "Petrus Paes, Lus." left Lisbon in 1588: captured on the way to Ethiopia, 1590; was many years in captivity in South Arabia, together with Fr. A. Monserrate; returned to India in 1596; was to return eventually to Ethiopia and enter it.

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contrary winds threw her back upon the coast. Not discouraged, they started a second time. Hardly had they set sail when a storm struck the ship so violently that it forthwith broke the mast. The sailors wanting to throw it into the sea with the sail-yard, it gave the ship such a hard shock that everything seemed topsy-turvy. The rest, however, had had a successful voyage up to Diu.

"Now, as I had been chiefly instrumental in starting that mission, it would seem that the common enemy of mankind wanted me too for a prey to his fury.[1]

The very week when Fr. Soarez left for Diu and Fr. Francis Corsi for Lahor, I had gone on business connected with the College to a place six miles from Daman. On the way back, as we tried to cross a rather troublesome river (P. 17) where it empties into the sea, a wave struck our boat with such force that it capsized completely. We were twelve. Those who could swim escaped. As for me, unable to catch the boat owing to the quick rush of the water, I got hold of our servant Paul; but, while he tried to save me, we went to the bottom both. What to do? As if doomed to death, I commended my soul to the Lord Jesus Christ, and, having let go Paul, I came to the surface, I know not how, and on looking above the waves I saw Paul dragging me towards the shore. Not seeing me come up for a long time, some thought me dead. But a Christian of our Church of Blessed Mary, which we have at Bazain, had with no small danger to his life plunged back into the water to search for me, and—so Paul says—he kept shouting: "Must our Father die like that?" This man first pulled out Paul from the bottom; next, with the help of the two and God's mercy, I was brought ashore, and from there I came to the College, where within four days (P. 18) I recovered my strength and pursued my journey. A priest of the College of Bazain[2] told me that, on the day when I ran that danger, he was so strongly convinced I should get drowned in the Daman river[3] that he offered Holy Mass to God for my safety. And I cannot but own that I was saved from that evident danger by the Providence of God and that Father's prayers.

I must describe here the notable conversion of a Banian which happened[4] the very day of my shipwreck. It is generally said that our missions are of little or no use to the Banians, so stubbornly are these people attached to their superstitious beliefs. Well now, one of them, a merchant,[5] a

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[1] The accident to Fr. Pimenta must have taken place within a week or so before 26. 2. 1600.

[2] Note on the map the distance between Daman and Bassein.

[3] 'Daman River' would be the translation of 'Damanganga,' the river south of Daman.

[4] At Daman.

[5] Banian, from *vāṇiya*=merchant. He may have been a Jain.

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man of good and mature judgment, had—as he deserved—been cast into chains and condemned to the extreme penalty for buying lead and gun-powder from people who stole from the military store-room. Hearing this, I sent at once a Father, telling him to leave no stone unturned in order to win that soul for Christ. I remember I said this: "Go, my Father; for, though the obstinacy of those people (P. 19) seemingly precludes all hope of salvation, it is our duty not to shirk the labour and to place in God all our confidence." The Father went. He tried hard and long to make an impression on the man's heart; in vain. The next day he went again, and tried sundry arguments to get him to worship the true God. The man answered: "Father, do not leave me; (*aliquid erit*) there will be something." Finally, on coming to the place of execution, the Banian revealed his mind and said: "When you spoke to me the first time, I had already resolved to give myself to the Lord Christ; but I thought I must not declare it then, lest any one should suspect me of simulation, as if by taking that resolution I wished to save myself. Now that death stands at the door and there is no longer any fear of suspicion, I cast myself into the arms of God's mercy, and beg of you earnestly to intruct me, as becomes your office; do so at once, so that, as I am about to close the eyes of this body, I may begin at last, however late, to open the eyes of my soul." Hearing this answer, the Father sent some one at once to the Governor with the happy news. Through the same man the Governor sent back the order to remand the culprit to prison. (P. 20) Here the condemned man spoke to the Father thus: "Father, do you think that what you taught me is enough for my soul's salvation and to enable me to see my Lord Jesus Christ in the next world?" "It is enough," the Father said. "If that is so," said the Banian, "I utterly abhor this wretched life which gave me occasion for such offences against God. I want to be baptized at once and be called by the saving name of Jesus: for I would not give the executioner the chance of prolonging my life." He received baptism, kissed the crucifix, and with the sweet name of Jesus on his lips this good thief yielded up his soul to his Maker.

As this conversion was in many ways wonderful and our kings have decreed by law that this sort of people must be shown every form of kindness, the Father of the Christians commended him to the Confraternity of Mercy, which obtained the body from the court. The Brethren, finding the body without any evil smell after three days, decently clothed it and bore it to the grave, all the people following. (P. 21) If this conversion gave much pleasure to the Christians, it created not less surprise and confusion among the Moors and gentiles. They understood from the story of the Banian, who had taken in baptism the same of Salvator (*qui nomen Salvatoris in baptismo*

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assumpserat),[1] that the Lord Christ was also the Saviour of the Banians.

Now, to speak of everything in order, I think it worth while to add here a copy of the letter which Fr. Gaspar Soarez wrote on the 3rd of May [1600] about his mission at Diu.

He writes :—

"We arrived safe in this town on the 26th of February, and were most heartily received by all. At the sermon which I preached, there was a great concourse of people of all ranks, the clergy, the laity, and the Religious of St. Dominic and St. Francis. I explained that we had come because we wished greatly to pass from Diu to Ethiopia in order that, even if we failed perhaps to bring back the Abyssinian schismatics, we might convert sixteen hundred descendants of Portuguese,[2] who, like sheep without a shepherd, were miserably running astray ; moreover, like the other Religious, we wished to labour to the salvation [P. 22] of their own souls, through the ministrations of the Society.

"But the Banian merchants showed openly enough that our arrival would be unwelcome to them, if we wanted to establish ourselves here. They feared it would be attended with danger to their temples, where they perform their devilish ceremonies publicly and safely, some tepid and inquisitive Christians going so far as to visit them. Hence, they resented much to see me going along, with a cane in my hand, at the head of a group of children carrying the banner of the Christian Doctrine.[3] They wrote to the chief Brachmans and Banians of Goa and to some Portuguese, their friends, that they could not bear the sight of us, and they protested before the judge of the royal custom-house[4] that they would rather go elsewhere than put up with our impostures. But they were told that, whether they liked it or not, our Fathers would remain there. The result was that they dared not mutter another word against us after that, and they learnt to their own advantage how much spiritual profit our instructions brought about in a short time. Many important restitutions followed ; [P. 23] public scandals were removed ; very many calumnies were put a stop to ; timely remedies were applied for the cure of very grievous distempers. We explain the Christian doctrine to the prisoners, and to the poor in the hospital, and many pagans have already asked for holy baptism. The Holy Table is also frequented much more than ever hitherto.

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[1] The 'Banian' had asked to be baptised by the name of Jesus; as this name could not be given, an equivalent name, 'Salvador' in Portuguese, was given him.

[2] This number appears to me exaggerated. [3] The Catechism.

[4] *Doganae regiae judici.* 'Dogana' is an Italian word ; *douane* in French. Fr. Busaeus, the Latin translator, may not have known what to make of it.

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"The Reisbuts[1] are one of the chief and most warlike races of the neighbouring Mogores. God deigned to call one of them, a young man of 22 years, to the holy font. On account of his excellent character and his skill in reading and writing, I have kept him near me, in the hope that he will serve me some day as interpreter, and as a faithful coadjutor in the conversion of his countrymen. Not a day passes without meeting with occasions to make Christians. On the other hand, as was Your Paternity's prudent advice, in this matter too we have to proceed with much circumspection.

"If the Society should once gain a firm footing in this town, I am fully confident in the Lord that the Mission of Ethiopia, one so necessary and so much longed for, will [P. 24] become easily accessible. It will be possible to send from here labourers to Ethiopia, as also to the Mogor Mission *viâ* Sind, where[2] a couple of our priests would be enough to save 60 or 70 Portuguese, who generally winter there,[2] and there would probably not be so much lack of labour in the other places as near the Mogor himself. Then, there are large numbers of Pagans here. And we have no doubt that, while caring for the Portuguese of the garrison and for the fleet, which usually winters in this harbour, we can also procure the salvation of the inhabitants. In a word, the actual and future harvest encourages us wonderfully to put up with every difficulty, and it has sweetened thus far all the bitterness of troubles and dangers. With the help of God's grace, let Your Reverence prepare to remove all obstacles, so that all the plans and efforts of Satan's ministers to expel us from here may prove futile. We do not doubt either but the grace of the Holy Ghost will prevail over all the machinations of men and of hell itself. To the patronage of the Holy Ghost do we recommend this church and house of ours, [P. 25] which we have started building according to Your Reverence's instructions and the wishes of the Christian inhabitants. Our Brother, my companion,[3] presses the work; he is in good health, and his humility, modesty and fervour edify all. From Diu, the 4th of May of the year 1600."[4]

Fr. Soarez' fear was not without foundation. The Prefect of the town of Diu,[5] to show to the Father how displeased he was with the order given to himself,[6], asked the Father not to be surprised if his assistant (*adjutor*) ordered him in the name of the law to quit Diu in three days. The Father answered with

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[1] Rājpūts.

[2] Akbar had developed the *bandar* of Tatta to draw away from Diu, a Portuguese port, the monopoly of cotton, indigo, and opium.

[3] Bro. Melchior Perez.

[4] Note the date: 4-5-1600, instead of 3-5-1600 above (p. 21).

[5] At p. 118 of this letter we hear of the Prefect of Diu, "Odoard de Melo" (1600).

[6] What order? Given by whom?

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due prudence and modesty, though the winter-season and the bad weather prevented everybody from leaving. This order greatly displeased many townsfolk too and others, chiefly the soldiers of the garrison. They told the Father by messenger to bear the insult bravely : for that manner of proceeding was nothing less, they thought, than betray the faith of Christ. They used that way of speaking, because the rumour and talk of the people was that the infidels were trying to get us to go ;[1] yet, forsooth, (P. 26) some had no other pretext for insisting on our leaving than that the town could not, without great temporal loss, bear any addition to the number of the religious. The Lord showed them that the pretext was false and vain : never, as they themselves declare, did more ships come to the port ; never was there such great profit and gain for all. About this time the Father had received from the Archbishop [2] a letter saying that he had been much pleased with this mission, and he commended it still more to his Vicar, offering the Church of St. Thomas for our ministrations.

These troubles made all good people beseech me most humbly not to let this Residence lapse and be suppressed ; they asserted on oath that it would procure very great glory to Almighty God and would be to the King's advantage.

Meanwhile, the rumour of the arrival of ours at Diu spread so far among the pagans in the neighbouring places that a certain king, called Iambo,[3] wrote to Fr. Soarez a most polite letter and allowed him (P. 27) to establish himself in any part of his kingdom. To keep my spirits within proper bounds, I do not add here another letter of the same Father, in which he mentions as fruit of his labours a nephew (*nepotam*) of Prester John who lives there, and three Abyssinian youths, who came to Goa this year and are being educated in the Seminary of Santa Fè, to the great joy of the Archbishop and of all those who are eager for the conversion of schismatic countries.

It is time now to return to my departure and that of my companions. Having been saved from imminent danger in the Daman river, I fell into another, danger from robbers (not a small favour, as it allows me to see here some picture of the dangers of the Apostle Paul).[4] Three hundred of these robbers were plundering and devastating their own country, and in certain villages by which we had to pass they had in two nights murdered fifteen persons and abducted thirty into slavery. Keeping scouts to precede us, we rode night and day, and finally—thank Heaven—we reached Bazain (P. 28).

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[1] They implied, I understand, that the Prefect had let himself be bribed. [2] D. Aleixo de Menezes of Goa.

[3] The Jam of Navanagar, whose present representative is Ranjitsinghji of cricket fame.

[4] "Three times I suffered shipwreck ... in perils of robbers." (2 Cor. xi. 25-26.)

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Poor Fr. Jerome Cotta was less lucky in avoiding their ambushes. As he was going from Tana to Poncera[1] through the mountains, suddenly more than twenty robbers appeared, who rushed upon him and took all his money, though he was not carrying it himself, and all his other things, even a box of sacred relics: the only moderation they showed was that they let him keep what clothes he required to cover himself somehow decently; but they even took all his clothes from the young man who accompanied him, leaving him only a hair-shirt, which the good fellow had brought with him.

I visited the Salzete Churches, and got erected at Poncera a new one of St. Cecilia,[2] which the Most Reverend Archbishop has so greatly recommended and some[3] had hitherto prevented. At Tana, in the Church of St. Mary, I conferred their degree (*gradum attribui*) on fifteen of ours, distinguished for virtue, partly priests, partly brothers.[4] From there I went to Ciaul and left Fr. Jerome Cotta as Superior of all those parts. There I received letters from ours at Calecut, relating what I am going to say about the siege and capture of the Cugnales' fortress[5] (P. 29). On the 8th of April five of us took ship at Ciaul, with three young men of good character, whom the Lord sent from Portugal and Daman to enter our Society, and on the fifteenth of the same month we arrived at Goa, which we found exulting all it could, and in festivity, because of the return of the victorious fleet.[6] The sight of it and of our dear Fathers and brothers made me forget all my late perils, though I had well deserved some[7] in this last peregrination of mine.

[Fr. Melchior Coutinho, at the court of the King of Vijayanagar, wrote to Fr. Pimenta:]

"....He [the King of Vijayanagar, then at Chandragiri] is too lenient towards culprits. Accordingly, he is despised by his subjects, and the kingdom is a prey to dangerous and unbridled licence, as the following story shows.

The Great Mogor had sent to this Prince an Ambassador with various presents, chiefly fine horses. A great part of the

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[1] Poinser, in the Vicariate Forane of Thana (Salsette Island); the Church is now dedicated to N. S. dos Remedios. Cf. *Cath. Directory*, Madras, 1918, p. 85. At Mount Poinser the Church is dedicated to the Immaculate Conception (*ibid.*), as in the time of the Franciscan Antonio do Porto. Cf. *The Examiner*, Bombay, 28-7-1917, p. 293, col. 1.

[2] See previous note. I find no such church now in the *Catholic Directory*.

[3] The Franciscans, who had been long established on the island?

[4] This must mean that 15 Fathers, scholastics, and lay-brothers took or repeated their vows. They must have met from the various houses in the neighbourhood. This meeting would be made the occasion for a sort of family feast.

[5] A nest of pirates on the Malabar Coast, north of Calicut.

[6] Victorious over the 'Cugnales.'

[7] For his sins?

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presents, as also a splendid horse, was stolen by one of the king's subjects. Yet, the only punishment he inflicted on him for this execrable misdeed was to order him by letter to produce, the horse and the other [P. 71] presents which he had stolen, and he presented them with a precious stone to the Ambassador, who gave it to us, as he had been thirty days our guest. The Ambassador knows Fr. Xavier and our other Fathers who reside in the kingdom of Mogor; and, one day, he spoke with great praise of them and related how high they stood in the Great Mogor's favour; whereupon the King said he would not be second to him in that matter. It was thought that the King had refused to hear the Ambassador, and had rejected his presents, because he had learned from some of his Chiefs that the King of Mogor was not to be trusted, and that, since he had already subjected three Moorish kings, those of Abdenagran,[1] Idalcan, and Massulapatan,[2] he would next come to overthrow the kingdom of Bisnaga. But the King answered: "My kingdom is in God's hands. He alone can order that it be taken from me; but I shall not cease to defend it according to my power, and I have already resolved never to kiss the feet of Moors." Therefore, the next day, he gave audience to the Ambassador, and it is said he will send in return a fine present to the Great Mogor. . . . . (P. 72). As, however, he [the King] is levying troops and summoning to his Court the Lords and Chiefs of the kingdom, many conjecture that he is gradually preparing himself to defend his kingdom against the power of the Great Mogor; and I doubt not that God allows this in order that the Christian religion may be spread wider. . . . . "[3]

[P. 117]. In the same College [of Salsette, Goa] died Fr. Anthony Monserrate, who, after many great labours, was sent thither as to a place of rest.[4] But it pleased God to call him

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[1] Ahmadnagar ? [2] Masulipatam.

[3] Extract from a letter of Fr. Melchior Coutinho, no date, from Chandragiri, where he then was with Fr. Francis Ricci, and Brother Alexander, the Englishman, a painter. Fr. Manoel Veiga, the fourth Missionary, was then detained at S. Thomé (Mylapore), for the visitation of the College. The letter mentions the solar eclipse of Monday noon, July 10, 1600.

[4] Anthony Monserrate: born at Vic, in Catalonia, in 1535 or 1536, of a noble family; entered 10-1-1556; took his vows, 31-5-1558; left for India, 1574. Cf. *Mon. hist. S. J.: Litterae quadrimestres*, t. vi, (1559-1560), Madrid, 1925, p. 286 n.

He was the historian of the first Jesuit Mission to Akbar's Court, whose work see in *Mem. A. S. B.*, III (1914), pp. 513-704. He wrote two works on Arabia. MS., not yet discovered. Col. F. Wilford had a work of his, original MS., in 2 volumes, one of which contained the history of the Mission to Akbar's Court, the other dealing with the geography and natural history of India. These 2 MS. volumes were presented by Wilford to the Asiatic Society of Bengal, after January 1820. Cf. App. to *Asiatic Researches*, Calcutta, Vol. xiv (1822), where we have the entry: "Colonel Wilford: Commentaries of Padre Montserrat, autograph, 2 vols." The present

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shortly to the real place of rest, to the eternal reward. He had rendered great service in the Lord's vineyard, first in Portugal, especially at Lisbon, during the terrible plague which raged there in 1569, when he founded, for the sake of poor orphan girls destitute of all help, the famous monastery of St. Martha, which is to-day reckoned one of the chief of the whole town. Then, he suffered great things in these parts among the Mogores, and during his seven years' captivity among the Moors of Arabia, into whose hands he fell, when on his way to the country of Prester [P. 118] John, whither he was going to console the few Christians remaining there. Repeatedly had he asked with many tears to be devoted to that Mission.

Catalogue of the library of the Society does not mention them, and the Secretary did not come across them last year (1925), when I asked him to make a search for them. Are they mentioned in any of the earliest library Catalogues of the Asiatic Society of Bengal? How did these MSS. disappear? Were they stolen or allowed to perish? The loss is greatly to be regretted.

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Fr. N. Pimenta's Annual of Margão, Dec. 1, 1601.

Translated and edited by the REV. H. HOSTEN, S.J.

This Annual Letter, addressed to the General of the Society of Jesus in Rome by Fr. Nicholas Pimenta, S.J., the Visitor in India, was never published. It is in Portuguese, and divided into numbered sections.

The original document, in the possession of the Society of Jesus, was partly photographed for me. It appears to be the copy read by the General or by his secretaries or Assistants, as appears from the marginal observations in Italian.

St. Joseph's College, Darjeeling,
11-8-1926.

* * *

O P. Manoel Gaspar professo de quatro votos, o P Franco Lamra coadjutor formado, os Pes Franco Lopes, Sebastiao Fr'z, Po Ribeiro, Bertolameu Tedesquy, e os Ir's Mucio Roque, Christouao Ferra, e Vicente Carruba coadjutor, e foraõ mto bẽ accõmodados

Fr Manoel Gaspar,[1] a professed of four vows; Fr. Francisco Lameira,[2] a formed coadjutor; Fathers Francisco Lopes,[3] Sebastiaõ Fernandez,[4] Pedro Ribeiro,[5] Bertolameu Tedesquy,[6] and Brothers Mucio Roque,[7] Christovaõ Ferreira,[8] and Vicente Carruba, a

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Passages from * to *a* were underlined in Rome.

[1] My photographs of the MS. begin here. There is question of new Missionaries being sent to Japan from Goa.

"P. Emmanuel Gaspar, Lus." left Lisbon in 1589 (*Franco*). He accompanied in 1600 André Furtado de Mendoza's fleet for the operations against the Cunhale. Cf. Pimenta's Annual letter of 1-12-1600 (Moguntiae, 1602, p. 29).

[2] "P. *Emmanoel* Lameira, Lus." left Lisbon in 1600 (*Franco*). Sommervogel, IV. 1426, mentions one Manoel Lameira, a Portuguese, b. 1571, admitted 1598, Rector of Thana, Diu, and the novitiate at Goa, who went to Ethiopia in 1627, and died before 1633.

[3] "Franciscus Lopes, Lus." left Lisbon in 1592 (*Franco*).

[4] "Sebastianus Fernandes, Lus." left Lisbon in 1597 (*Franco*). Another of this name, b. 1543, admitted in 1565, who was at Goa in 1569, is not likely here. (Cf. Sommervogel, III. 657; IX. 326.)

[5] "Bartholomaeus Tudesque," no nationality given, left Lisbon in 1600 (*Franco*).

[6] "Petrus Ribeiro, Lus." left Lisbon in 1600 (*Franco*).

[7] "Mucius Rhodio, Ital." left Lisbon in 1597 (*Franco*). The identification with 'Mucio Roque' may be considered very likely.

[8] "P. Christophorus Ferreira, Lus." left Lisbon in 1600. He died a martyr in Japan (*Franco*).

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prinçipalm^te de agasalhados, q' hè nas naos o prinçipal p^a a saude, e vida, e aindaq' tendo ja o fato embarcado hũ certo homẽ, q' hia por capitaõ da viagẽ de Maluco com sua molher, e casa, pretendeo tomar lhes a varanda, e camara pollas costas q' tinhaõ no capitaõ Mor da armada do Sul, com q' estaua aparentado, todauia recorrendo com efficaçia ao Visorey, depois de ter mandado informar o Arcebp̃o e outras pessoas graues da semrezaõ q' se nos fazia, e difficuldade, ou impossibilid^e q' aos P^es se opunha p^a passarẽ este anno a Japaõ, acudio s. s^ria, e obrigou o tal homẽ a ir de noite cõ tochas despejar o aposento dos P^es'.

coadjutor.[1] They were very comfortably installed, chiefly as regards lodging, which on board is the chief thing to preserve health and life. And although a certain man, who was going with his wife and family as captain of the Maluco voyage,[2] had already embarked his goods and wanted to take the varanda, and the room at the back, which they had in the Captain-in-Chief's ship of the Southern fleet, to whom he was related, yet, by having recourse insistingly to the Viceroy,[3] after getting the Archbishop[4] and other important persons informed about the injury he was doing us, and of the difficulty or impossibility for the Fathers to go to Japaõ this year, His Lordship interfered and obliged that man to go at night with torches and empty the Fathers' room.

Por capitaõ mor da armada q' digo foy Andre Furtado de Mendoça assy p^a alimpar aquelles pouos de nauios Olandezes, como p^a socorrer a Maluco, e outros bons intentos pedio me instantem^te P^es, e foraõ com elle no seu mesmo galeaõ dous Brizio

The Captain-in-Chief of the said fleet was Andre Furtado de Mendoça,[5] who went both to rid those populations of Dutch ships and to succour Maluco, and for other good purposes. He asked me urgently for Fathers, and so two went with him in his own

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1 "Vincentius Carruba, Sic." left Lisbon in 1600 (*Franco*).

2 Was not the right to trade in certain parts farmed out ?

3 Ayres de Saldanha, 17th Viceroy; left Lisbon on 4-4-1600; arrived at Cochin on 28 (22 ?)-10-1600, and Goa on 6-1-1601; governed 4 years and 4 months. (P. Man. Xavier, S.J., *Compendio Universal....* Nova Goa, 1917, p. 71.)

4 D. Aleixo de Menezes.

5 Andre Furtado de Mendonça, succeeded the Conde da Feira, who died at sea on the journey out: 20th governor; governed 3 months and 3 days (28-5—31-8-1609); died at sea on the way home; was buried in N. Sra. da Graça, Lisbon. (M. Xavier, *op. cit.*, p. 72.) In 1600 he brought the Cunhale, a famous Malabar pirate, alive to Goa, where he was beheaded and quartered in 1600 (*ibid.*, p. 71).

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Fr'z, e seBastiaõ da Veiga, e o Ir' Antº Gomez pª ficar em Malaca; leuaua intento de fazer fortaleza no Achem, e queria patres pª ficarẽ nelle, q' lhe naõ concedemos esperando, plo sucesso, e plª informaçaõ do Rºr de Malaca à cuja obediençia haõ de estar os ditos Pes em qto por là andarẽ.

11. No Collegio de Salcete, e suas residençias vay em mto crecimto a christandade. Mandamos o P. Frco da Cunha Rºr delle auia 4. annos, por Rºr de Thana pª por em milhor forma a christãdᵉ e Igrᵃˢ de Salçete de Baçaim. Tornãdo a por em Salcete de Goa o Pᵉ Thomas esteuaõ meu companhro ajudando me eu do P. Gomez vaz em qto estiue em Goa, porq' aquy em Salcete

galleon: Brizio Fernandez[1] and Sebastiaõ da Veiga,[2] and Brother Antonio Gomez,[3] who were to remain in Malaca. It was his intention to make a fortress at Achem, and he asked for Fathers to remain in it, which we did not grant him. We await the result and informations from the Rector of Malaca, under whose obedience the said Fathers must be whilst they are there.

11. In the College of Salcete[4] and its residences the Christianity[5] is making great progress. We send Fr. Francisco da Cunha,[6] the Rector of it four years ago, to be Rector of Thana and shape better the Christianity of the Churches of Salçete of Baçaim. We placed again at Salcete of Goa Fr. Thomas Estevão,[7] my companion,—Fr. Gomez Vaz[8] helping me[9]

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[1] "P. Britius Fernandes, Lus." left Lisbon in 1586 (*Franco*).

[2] One Sebastian da Veiga was minister at Goa in 1571, possibly the same who died there on 20-5-1605. (Sommervogel, VIII. 534.)

[3] "Antonius Gomes, Lus." left Lisbon in 1596 (*Franco*). One of this name, at Cochin in 1610, was sent to Goa (L. Besse, S.J., *App. ad catal.*) (*Miss. Madur.*, 1919, p. 23). One of the same name was at Reytora (Malabar), 1628. (Besse, 1918). One of the name, sacristan in the College of Malaca in 1604 (Besse, 1916), may be the one mentioned here.

[4] Salsete of Goa. [5] The Christian Mission.

[6] Not found in Franco or elsewhere.

[7] The great Thomas Stephens, the Englishman, too well-known to require comment. He went to India at the age of 26 years and died at Goa in 1619. "Thomas Stephens, Anglus," is mentioned by Franco as leaving Lisbon in 1579. Franco mentions also one "Thomas Anglus," nationality not stated, as leaving in 1575. Perhaps, Fr. T. Stephens was to have left in 1575, but did not then leave. The Parish registers of Loutulim are signed by him in 1613. Cf. *O Heraldo*, Goa, 23-12-1916. In 1601, he must have been at Margão with Fr. Pimenta. See on him *Voyage of Pyrard de Laval*, Hakluyt Soc., London, 1890, II. 269-270.—Another Englishman, Bro. Alexander, a painter, was at the Court of Chandragiri in 1601. Cf. Besse, *Catal.* 1914, and Pimenta's Annual Letter of 1-12-1600 (Moguntiae, 1602, p. 66).

[8] "P. Gomius Vas, Lus." left Lisbon in 1564 (*Franco*). Probably the Gomes Vaz of Sommervogel, VIII. 509: b. at Serpa 1542; admitted 1562; professor of philosophy at Goa, and 10 years of theology; superior of the Residence of Malaca; d. at Lisbon, 13-9-1600.

[9] As Secretary.

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aonde agora fico, o mesmo P. Thomas Esteuaõ basta pª hũa, e outra occupaçaõ.

12. Saindo de Goa pª as pᵗᵉˢ do Norte, em Chaul naõ ouue cousa de nouo senaõ he tratar o Vigᵣᵒ daquella cidade de fundar aly collegio, e naõ serà mal empregado, porq' he escala de todo o Decaõ, e Cambaya. entretanto se confirmou a ordinaria* comq' se sustentaõ oito ou noue q' aly residem.ª Ardeo em bandos aqˡª cidade este inuerno, e ajudaraõ mᵗᵒ os nossos ao sᵒʳ Arcebispo q' nella inuernou, em os pacificar.

13. No Collegio inchoado de Thana, e Salcete de Baçaim tambẽ naõ ouue cousa de nouo de mᵗª importançia, senaõ foy huã opiniaõ, q' começou a correr pˡᵒˢ nossos q' a bulla da Cruzada q' cà esta publicada de nouo por tres annos, derogaua nossos priuilegios, naõ obstãte a declaraçaõ de Gregorio decimo terçio, e q' podiaõ os Nossos tomalla, e escolher confessor q' *absolueret a reseruatis*. Os fundamentos hè hũ tratado de Frey Mᵉˡ Roiz,* e hũas glossas de Napoles do Pᵉ Surrentinoª. oqˡ com outros algũs paten-

while I was at Goa, because here in Salcete, where I am now, the same Fr. Thomas Estevão suffices for both occupations.[1]

12. If we go from Goa to the parts of the North, at Chaul there was nothing new except that the Vicar of that City thinks of founding a College there, and it will not be a bad move, since it is the port of call for the whole of the Decaõ and Cambaya; meanwhile the annual allowance was confirmed, on which the eight or nine residing there live. This winter[2] that City was distracted by factions, and ours greatly helped the Lord Archbishop, who wintered there, in pacifying them.

13. In the *Collegium inchoatum* of Thana and Salcete of Baçaim there was again nothing of great importance either, except a certain opinion which began to spread among ours that the Bull of the Crusade which has been published here again for three years, abolished our privileges, despite the declaration of Gregory XIII, and that ours could take it and choose a confessor to absolve them from reserved cases. The reasons for this opinion are a treatise by Friar Manoel Roïz[3] and certain glosses from Naples[4] by Fr. Surrentino[5],

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[1] As Secretary and Rector.

[2] Rainy season.

[3] Roïz=Rodrigues or Rodriguez.

[4] A marginal note in another hand occurs here: "*Scrib. Neap.*" Perhaps, the meaning is: "Write to Naples" (for information on this point.)

[5] "P. Vincentius Torrentino, Ital." left Lisbon in 1597 (*Franco*). This is the only name in Franco which resembles 'Surrentino.' I had at first read the name as 'Turrentino' in the MS., but the name is written with a clear S in the MS. the second time.

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temtc tinhaõ tomar a bulla, cuido q' sem outro motiuo mais q' o das indulgençias. Auisado plo Pe Proual q' là andaua visitando lhes mandey a copia do Breue de Clemente VIII, N. Sr. com o q' o P. Proual os tirou desta ignorãçia mostrando lhe naõ ser materia de opinioẽs, e ainda sem isso ser falsa a de Napoles, e a do Mel Roiz q' este mesmo autor. . .tratou em outra obra mais moderna. E todauia aos q' là boliraõ nisto, se lhes deu penitençia, de q' se queixo mto o P. Surrentino, e na verdade outro teue mais culpa q' elle.//

De Baçaim, e Damaõ se naõ offereçe mais q' irẽ por diante, e o q' nestes Collos, e mais lugares do Norte tiuer aduertido o P. Proual na sua visita q' fez ja sobre a minha do anno passado, elle avisarà a V.P. Os apuntamtos da minha mando com esta pa V.P. aprouar, ou emẽdar, o q' lhe pareçer.

14. *A residẽçia de Dio vay em mto crecimto a desfez o Visorey as iniustas prohibiçoẽs de seu antecessor, e escreueo ao capitaõ da cidade cartas muy fauoraueis, e aos mesmos gẽtios. pelloq̃ ja naõ

who with some others wished openly to take the Bull, without any other motive, I think, than that of the indulgences. Informed by the Fr. Provincial, who was going about there on his visit, I sent them the copy of the Brief of Clement VIII, Our Lord, whereby the Fr. Provincial drew them from their ignorance, showing them that it was not a matter of opinions, and that, even without that, the opinion of Naples and that of Manoel Roïz is false, as this writer has treated of the matter in another more recent work. However, those who over there stirred in this matter were given a penance, wherefore Fr. Surrentino complained a good deal, and, indeed, another was more at fault than he.//[1]

As regards Baçaim and Damaõ, the only thing to be said is that they go forward. Fr. Provincial will advise Your Paternity concerning what he may have remarked in these Colleges and other places of the North during the visit he made already, over and above mine of last year. Herewith I send the remarks of my visit, that Your Paternity may approve or amend them, as you will think fit.

14. The residence of Dio[2] is progressing greatly. The Viceroy removed the unjust prohibitions of his predecessor[3] and wrote to the Captain of that city and to the gentios themselves very favourable

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a Passages from * to a were underlined in Rome.
1 New page; on recto of leaf.
2 Diu.
3 Dom Francisco da Gama.

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hà contradiçaõ algũa, e por ordem dos q' aly residẽ q' saõ dous Pes e hũ Ir, mandou dar hũa grossa esmola aos catholicos do Preste com q' se vaõ alentãdo, e sustentando na Fè cõ a assistençia daquelle Pe nosso alumno em qto os Pes naõ possaõ, *os qes nẽ este anno passaràõ segundo as nouas q̃ tẽ vindo daquellas ptes a de guerras entre os Turcos q̃ estaõ nas garnicoẽs, e os Arabios q̃ mataraõ a Baxa Gouernador da quella costa.

15. A missaõ do Mogor reforçarémos este anno cõ a occasiaõ da embaixada, q' Elrey Achebar mandou ao Visorey: veyo por Embaixador hũ Parsio q' foy gouernador de Cambaya por nome Cogequy Soltaõ Amad, cõ oq[1] mandou com o mesmo titulo o Irmaõ Bento de Gois, aindaq' nos recebimtos q' foraõ de mto apparato, se deu ordem q' o Ir' religiosamente se retirasse. Naõ deu esta embaixada daquelle Rey nestos ptes a tal t'po q' vinha victoriozo conquistado o Rno do Miraõ, pouco em q' cuydar, porq' letters; wherefore, there is no longer any opposition; and through those residing there, that is, two Fathers and a Brother, he ordered a big alms to be given to the Catholics of the Prester,[1] by means of which they maintain themselves, and persevere in the Faith with the help of that Father, our pupil,[2] as long as our Fathers cannot [go over]; this year neither will they go over, considering the news which has come from those parts about wars between the Turks who are in the garrisons and the Arabs who killed the Baxa,[3] Governor of that coast.

15. This year we shall reinforce the Mission of the Mogor on the occasion of the embassy which King Achebar sent to the Viceroy. There came as Ambassador a Persian (*Parsio*), named Cogequy Soltaõ Amad,[4] who was governor of Cambaya. With him he sent under the same title Brother Bento de Gois; however, in the receptions, which were very pompous, the order was given that the Brother should religiously withdraw. This embassy of that king, coming to these parts at a time when he was victorious and had conquered the King-

[1] Of Prester John of Ethiopia.

[2] Probably an Indian or half-caste, who could more easily disguise himself. Apparently Padre Belchior da Sylva. Cf. Gouvea, *Jornada*, l. 1, Cap. 6.7.8.

[3] The Arabic form (Bāshā) of *paxá*, *i.e.*, governor or sub-king, according to Mgr. S. R. Dalgado, *Gloss. Luso-Asiático*, Coimbra, I. 105.

[4] V. A. Smith, *Akbar* (1917), p. 288, has the name 'Cogetquius Sultanus Hama', through some Jesuit authority, like du Jarric. He restores it to "Khwāja Sultan Hāmid, or something like that," but could not identify the person. In Pimenta's Annual Letter of 1-12-1601 he is called Sultan Hamet, military chief in Cogi (Cutch ? Gogo ?).

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pareçia q' vinha este embaixador tomar lingoa, e elle desẽbuçadamente falaua, e procedia com grãde liberalidade, mas D's. N. S^{or} ordenou as cousas de modo q' o nouo Milique, tio do Rey minino, q' o Mogor tẽ em seu poder, lhe resiste valerosam^{te}, e elle se fez na volta de Agrà: agora se anda fazendo prestes o embaixador com que torna o mesmo Ir' e polla occasiaõ ser tam boa, nos pareçeo a todos deuiaõ ir cõ este embaixador dous P^{es} p^{a} prĩcipiare a empresa de Cambaya depois de estarẽ algũ t'po na Corte, e delles, e dos q' la estaõ se poder armar a missaõ do Catayo, indo porẽ p^{ro} a explorar este negocio tamanho o Ir' Bento de Gois; temos designado p^{a} esta ida cõ o Embaixador à corte, o P. Ant^{o} Machado, q' agora hè R^{or} de Baçaim, pessoa q' tãbẽ pode socceder ao P. Xavier, e com isto acabo a informaçaõ das p^{tes} do Norte, e assy da Prou^{a} de Goa segundo a noua ordẽ de V. P.

dom of the Miraõ,[1] gave much food for reflection: for it seemed that this ambassador came to take information, and he spoke rather openly, and behaved with great liberality; but God Our Lord ordained things in such wise that the new Milique,[2] the uncle of the young King whom the Mogor has in his power, resists him valiantly, and he[3] went back to Agrà[4]: the ambassador is now getting ready and the said Brother returns with him; and, as the occasion is such a good one, we all thought two Fathers ought to go with this ambassador in order to start the enterprise of Cambaya, after they have been some time at the Court, and in order that with them and those who are there the Mission of Catayo (*do Catayo*) may be tried, Brother Bento de Gois going however first to explore this important affair. We have designated, for going to the Court with the Ambassador, Fr. Antonio Machado, now Rector of Baçaim,[5] a person who besides can succeed Fr. Xavier, and

[1] Bro. Benedict Goes was with Fr. Jerome Xavier in Akbar's camp till after the treacherous capture at Asīrgaṛh of the Mīrān, Bahadūr Shāh of Burhānpur, and even till after the death of the Abyssinian commander of Asīrgaṛh. Akbar's letter to the Viceroy, Ayres de Saldanha, was dated March 20, 1601 (Farwardīn 9, Ilāhī or regnal year 46). The embassy arrived at Goa towards the end of May 1601. (Cf. V. A. Smith, *Akbar*, 1917, p. 269, and H. Heras, S.J., in the *Ind. Antiq.*, LIII (1924), pp. 33–41.)

[2] Before occupying Burhānpur, Akbar had taken the kingdom of the Melique and had garrisoned it with a detachment from his army under the command of his son Dāniyāl, whom he left there. (H. Heras, S.J., *Ind. Antiq.*, LIII (1924). p. 35.) There is question here of the king of Ahmadnagar. Nearly three centuries earlier, Friar Odoric speaks of the Melic of Thana. Cf. Yule, *Cathay*, 1866, I. 69.

[3] Akbar.

[4] In April and May 1601, says V. A. Smith, *Akbar*, 458.

[5] "Antonius Machado, Lus." left Lisbon in 1586 (*Franco*). Cf. *J.P.A.S.B.*, 1910; 528. 539. 540; Vol. XXI, 1925; 59.

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herewith I conclude my informations concerning the parts of the North, and likewise of the Province of Goa, according to Your Paternity's new instruction.[1]

16. Voltando pª o sul, a prª casa q' se offereçe hè a residencia de Calecut sogeita ao Collº de Cochim, nesta residem 2 Pes e vaõ se pondo as cousas por ordẽ pª se perpetuar cõ o fruito q' se espera. Segue se na mesma costa do Malauar Paliporto q' dizẽ q' foy o prº porto q' tomou S. Thome, passando à India, aquy fundou o srˢ Visorey hũa noua Igrª onde elle em pessoa leuantou a prª Cruz daqˡ escreuẽ algũs milagres. *Tem dado esta Igrª à Compª ª e hè residençia do Collº inchoado de Vaipicotta q' fica perto.

16. Turning to the South, the first house which presents itself to us is the residence of Calicut, which is subject to the College of Cochim. In this residence there are two Fathers;[2] here matters are being put in order, to become permanent with the fruit which is expected. Next comes, along the same coast of Malavar, Paliporto, which they say was the first harbour where St. Thomas landed when he came over to India. Here the Lord Viceroy founded a new Church,[3] where he erected personally the first Cross, about which they write some miracles. He has given this Church to the Company, and it is a residence of the *Collegium inchoatum* of Vaipicotta, which is near by.

17. Este Collº de Vaipicotta ou terra noua teue este anno mtª occupaçaõ, e gastos

17. This College of Vaipicotta[4] or New Land had much work and many expenses this

[1] We may remark that the Annual Letter follows the geographical order of the Colleges and Residences from Goa to the North, and then from Goa to the South and East.

[2] In 1604 there were at Calicut: Fr. James Fenicio (*Finissius*) of Capua, and Fr. Victor Gradi. Fenicio was at the Zamorin's Court from 1600. He left Lisbon in 1583; Gradi in 1603. Cf. Besse, *Catal.* of 1919, p. 22. Fenicio is the author of a remarkable treatise on Hindu mythology. Cf. Jarl Charpentier, in *Bull. of the School of Oriental Studies*, II (1921-23), 731–754. He visited the Todas of the Nilgiris in 1603.

[3] Ayres de Saldanha reached Cochin from Lisbon on 22 (28?)–10–1600, and entered Goa on the feast of the Three Kings (6-1-1601). He began a fort at Cochin and Rachol. His doings at Paliporto must come between 28-10-1600 and 6-1-1601. The *S. João* arrived at Cochin on 21-10-1600, with 10 Jesuit Missionaries; the next day 22 (or 28 *alibi*) arrived the Viceroy with 8 Jesuit Missionaries. Cf. Pimenta, *Exemplum Epistolæ Cal. Dec. Anno 1600*, Moguntiae, 1602, p. 122, and M. Xavier, *op. cit.*, pp. 38-39, 71.

[4] Not far from Parur; now "Chennamangalam."

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cõ entrada do nouo Bpó, mas cuido o socorremos de ventagẽ. * o P. Bpó ª faz seu offº exactamente, e està muy bẽ recebido de todos os seus. Teue por occaziaõ delles mtos desgostos com o capitaõ de Cranganor, e chegou o negocio à se temer se apartassẽ algũs pouos// da obediençia do Prelado, por dizerẽ, q' nunca taõ vexados foraõ, qn' estauaõ na obediencia dos Sismaticos. Estaua neste t'po o Visorey cõ nosco em Sta Anna. informey o do negoceo. acudio cõ tanto zelo q' eu mesmo procurey moderarlho, todauia mãdãdo me mostrar todas as cartas, q' a este proposito escreuia me pareçeo naõ o desuiar deste rigor sancto polloq' importaua à noua vniaõ d'aqla Igra cõ à catholica Romana a authoridade do pro Prelado Latino q' tinhaõ.

Chegou pois o despacho em q' se mandaua logo depor o capitaõ de Cranganor por naõ ter o diuido respto ao Bpó d' Angamale, e se mandaua deuaçar delle pera ser castigado conforme à suas culpas. Fi-

year owing to the new Bishop's entrance,[1] but I think we help him profitably (*mas cuido o socorremos de ventagẽ*). The Father Bishop does his duty exactly, and is very well received by all his own. On their account, he had many annoyances from the Captain of Cranganor, so much so that it was feared some populations[2] would fall away from the Prelate's obedience, because it was said [they said ?] that they had never been so much vexed when they were under the obedience of the Schismatics. The Viceroy was at that time with us at Santa Anna.[3] I informed him about the business. He closed with it with so much zeal that I myself tried to moderate him. However, though he ordered to show me all the letters which he wrote on this matter, I thought I ought not to turn him from this holy rigour, because the authority of the first Latin Bishop they had was of importance to the new union of that Church with the Catholic Roman Church. After that came the despatch in which he ordered to depose at once the Captain of Cranganor, because he did not show due respect to the Bishop of Angamale, and he was to be prosecuted and punished accord-

[1] Bishop Francisco Roz, Catalan; first Latin Bishop of Angamale, 1601; Archbishop of Cranganore, 1608; d. at Parur; buried at Parur, where a Malayalam inscription gives the date of his death as 18-2-1624. Cf. Paulinus a S. Barth., *India Orient. Christ.*, Romae, 1797, p. 64.

He left for India in 1584 (*Franco*). (Besse, *Catal.* of 1917, is to be corrected.)

[2] A new page; verso of leaf.

[3] Not identified. It must be a place near Cochin.

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caua cõ esta priuaçaõ do offº destruido o pobre homẽ q' tinha espalhado seu dinhʳº pª as mercançias, q' os taes capitaẽs custumaõ.

Por isso e pollo desemparo da molher, e filhos se multiplicaraõ os rogadores sobre o P. Bpó intercedẽdo o mesmo Arcediago, e christaõs de S. Thome, q' sobre estiuesse o capitaõ de Cochim a quẽ a execuçaõ hia cometida, atè o mesmo Bpó, aquẽ o capitaõ culpado prometia toda a emmenda, lhe auer perdaõ do Visorey. Assy o fez là o Bpo com mᵗᵃ edificaçaõ, e cà o alcãçamos de s. sʳⁱᵃ mandando porẽ ficar o despacho em aberto, peraq' se o capitaõ naõ comprisse sua palaura ficasse encorrendo na mesma pena.

18. Agora de nouo teue o P. Bpó nouas contradiçoẽs cõ algùs Reys gentios no deixando o de Angamale entrar em sua Igʳᵃ, mas pª atalhar esta, e outras desordens do nouo *Rey de Cochim ª e Regulos Malauares, proueo o Visorey na Capitania de Cochim Cosmo de Lafetà hũ capitaõ insigne aoqˡ encomendou encarecidamᵗᵉ as ... cousas daqˡᵃ christandᵉ, e elle me prometeo de

ing to his faults. Thus deprived of his office, the poor man was ruined, as he had staked all his money in commercial transactions, which such Captains are wont to do.

On this account, and because of the distress of his wife and children, more and more persons besought the Father Bishop in his favour, the Archdeacon himself and the Christians of St. Thomas interceding on his behalf, and asking that the Captain of Cochim, who had been charged with executing the order, should grant a delay until the said Bishop, to whom the incriminated Captain was promising full amendment, had obtained his pardon from the Viceroy. The Bishop did so over there, with much edification, and here we obtained the man's pardon from His Lordship; but the order was that the despatch should remain pending, so that, if the Captain did not keep his word, he should incur the same penalty.

18. The Father Bishop met now again with new opposition from some *gentio* [1] Kings, he of Angamale not allowing him to enter his Church. To stop this disorder and others from the new king of Cochim and Malavar Kinglets, the Viceroy appointed to the Captaincy of Cochim Cosmo de Lafetà, a famous Captain, to whom he commended earnestly the affairs [2] of that Christ-

§ 18. ª Passages from * to ª were underlined in Rome.

[1] Heathen.

[2] *As .. cousas.* One word not read, consisting of one letter, and two letters higher up, marking an abbreviation; it looks like *qes*, but I cannot give it any meaning.

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a trazer nos olhos dizẽdo q' o Bpó auia de ser o capitaõ etc. pedindome juntamente hũ P^e com q' se acõselhasse nas cousas de sua consciençia, prometendo de se naõ desuiar hũ põto como estou certo farà pello conhecimento antigo q' delle tenho, e imagine V.P. * q' capitaõ de Cochim hè naq^las p^tes hũ Visorey da India.[a] Ao P. Bpó dey 2 companh^ros a seu gosto, e principalm^te o P. Esteuaõ de Brito Reytor q' foy daquelle Coll^o era o mais a proposito q' lhe podia dar, o outro hè o Ir Felippe Fragozo coadiutor. Em lugar do P. Brito posemos por R^or o P. Ant^o Toscano.

19. A fundaçaõ deste Coll^o de Vaipicota offereçe Ant^o Guedes de Moraes oqual lhe tẽ ja f^to o edifiçio q' custaria cinco mil pardaos, * e empregado tres

ianity, and he promised me he would be mindful of it, saying that the Bishop had to be the captain, etc. He asked me[1] at the same time for a Father to direct him in the affairs of his conscience, and promised not to deviate a jot [from his advice], and I am sure from my long acquaintance with him that he will keep his word. Fancy, Your Paternity, that the Captain of Cochim in those parts is a Viceroy of India. To the Father Bishop I gave two companions to his taste: chiefly Father Estevaõ de Brito,[2] who was Rector of that College; he was the best man I could give him; the other is Brother Felippe Fragozo, a coadjutor.[3] In Fr. Brito's stead we placed as Rector Fr. Antonio Toscano.[4]

19. Antonio Guedes de Moraes offers the foundation for this College of Vaipicota. He has already made the building, which must have

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[1] Apparently, the Captain of Cochin.

[2] Stephen de Brito: b. at Villavicioza (Port.) in 1567; admitted, 1582; not found in Franco; was present at the Diamper Council, 1599; goes to the Maleas of Malabar, about whom he writes from Cochin, 13-10-1600; Rector of Vaipicota, 1600, as we conclude from this letter; *socius* to Bishop Roz, 1604. 1610. 1611; Rector of Cochin, 1619; Archbishop of Cranganore, 1624–41; d. at Cranganore, 3-12-1641, aged 74. Cf. Sommervogel, II. 141; VIII. 1931; Besse, Catalogues of 1917, 1919.

[3] Bro. Philip Fragozo: lay-brother, b. at Estremos (Porto); directs building operations at the College of Cochin, 1604; at the College of Cochin, 1610; socius of the Procurator, *ibid.*, 1611; *ibid.*, 1613; d. at Cochin, 5-8-1617, aged 43, after 20 years of life in the Society. Cf. Besse, *Catal.* of 1919.

[4] Anthony Toscano: b. at Mylapore, 1561; admitted, 1577; at the Council of Diamper, 1599; accompanies Archbishop A. de Menezes in his tour in Malabar, preaching in the native language, 1599; Rector of Vaipicota, 1601. 1604; Rector of Quilon, 1610; at the Residence of St. James, dependent on the College of Cochin, 1611; at the College of Cranganore, 1619. 1620; Rector *ibid.*, 1623; preacher and confessor, *ibid.*, 1627; at Cranganor, 1628. Cf. Besse, *Catal.* of 1917, 1919.

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mil em renda, e agora offereçe p^a^ emprègar em renda quinze mil,[a] tratey cõ o P. Prou^al^, e consultores se se aceitaria esta fundaçaõ, a todos pareçeo q' sy, *e lho mãdey dizer suspendendo a vlt^a^ resoluçaõ da aprouaçaõ de V.P.[a]

cost five thousand pardaos,[1] and he has devoted three thousand for a revenue, and now he offers fifteen thousand to be employed on a revenue.[2] I conferred with the Father Provincial and the consultors as to whether this foundation should be accepted. All were in favour and I ordered to tell him so, pending the last decision, Your Paternity's approval.

20. O Coll^o^ de Cochim se pode agora augmentar cõ a ajuda de hũ cidadaõ nosso deuoto chamado Giraldo Borges q' tendo mais de cincoenta mil pardaos, e naõ tendo filho, esta inclinado a deixar boa p^te^ a este Coll^o^ contentãdo se cõ obrigaçaõ de hũa missa, esperaua p^la^ informaçaõ particular q' tinha encomẽdado ao Padre M^el^ da Veiga sendo sup^or^ do sul. *Agora q' hè Viceprovincial[a] e o[b] tenho auisado do

20. The College of Cochim can now be augmented, thanks to the help of a citizen, a devoted friend of ours (*nosso deuoto*), called Giraldo Borges,[3] who, having fifty thousand pardaos and no son (*e naõ tendo filho*) is inclined to leave a good portion to this College, and would be satisfied with the obligation of one mass. I waited for the special information which I had entrusted to Father Manoel da Veiga,[4]

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§ 20. [a] Passages from * to [a] were underlined in Rome. [b] First: *lhe.*
[c] The whole of this paragraph was marked in the margin in Rome for special attention.

[1] In the margin, from another hand: *Videantur l'rae Ant. Schipani, R^ris^ Cochin.* "See the letter of Ant. Schipani, Rector of Cochin."

"P. Antonius Esquipano, Ital." left Lisbon in 1585 (*Franco*): b. at Cantanzarro (Naples), 1560; entered, 1559; military chaplain in Ceylon, 1589-97; at Cochin, 1600-10, as Rector (1602-07), or as professor of moral theology; or as spiritual father and professor of moral theology (1604); sent to Goa, 1610; d. at Goa, 8-12-1624, (aged 60 ?), after 46 years of religious life. Cf. Sommervogel, VII. 788; Courtenay, 327. 346; Besse, *Catal.* of 1913, 1919. There is something wrong with the dates of his birth or entrance.

[2] This Seminary was destroyed under Tippu Sultan. The ruins show a three-storeyed building. I visited them in February, 1924, by boat from Parur.

[3] We meet people with the name Borges in North India at a later time. Cf. my "The family of Lady Juliana Dias da Costa, 1658-1732" in *J. Panjab Hist. Soc.*, VII (1917), pp. 4-5.

[4] Manoel da Veiga: b. at Aveiro (Portugal), 1549; admitted, 1565; left for India, 1588; Goa, master of novices, 5 years; visits the Fishery Coast and S. Thomé and founds the Residence of Chandragiri, the then Court of Vijayanagar, 1599; at Cochin, 1601, as first Vice-Provincial of the Malabar Province; Goa, 1602, as Provincial of the Goa Province; d. at Goa, 1605, while Provincial. (Besse, *Catal.* of 1914, and Sommervogel.)

[a] Passages from * to [a] were underlined in Rome.

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recurso q' V.P. ordena tenha, e deixe de ter em seu gouerno, elle' tera cuidado de auisar a V.P.c//

21. O Coll° de Coulaõ com sua costa de Trauancor teue todas as ajudas temporaes q' lhe podemos dar. porq' o Visorey lhe mandou pagar à risca. O P. Joaõ Andre Boues lembrou em Pegù ao capitaõ mor Phelippe de Brito a fundaçaõ deste Coll°, este homẽ hè riquiriss°[*sic*], e pode fundar m^tos^, e à nossa residencia de Nagapataõ tem feito grossas esmolas. Elle me escreueo offereçendo a fundaçaõ do Coll° de Coulaõ. a copia da carta hè esta.

Permitta o S^or^ q' esta tome a V. P. com aquella saude q' este seu seruo lhe deseja.

when he was superior of the South. Now that he is Vice-Provincial and I have advised him about the inquiry (? *recurso*) which Your Paternity ordains he should make, and which he neglected to make during his government, he will take care to inform Your Paternity.

21. The College of Coulaõ [1] with its Travancor Coast had all the temporal assistance which we could give it, because the Viceroy ordered them to be paid exactly. Fr. Joaõ Andre Boves [2] reminded in Pegù the Captain-in-Chief Phelippe de Brito [3] about the foundation of this College. This man is very rich and can found many Colleges; and to our residence of Nagapataõ [4] he has given big alms. He wrote to me offering to be the founder of the College of Coulaõ. Here is a copy of his letter:—

"The Lord grant that this may find Your Paternity in that health which this your

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[1] Quilon.

[2] Andrew (*al.* John, *al.* Francis) Boves: b. at Messina, 1569, entered, 1585; left for India, 1597, reached Bengal, 7-9-1599; Bengal, 1600-01; 1602, at Chittagong, whence he wrote on 14-11-1602 an account of Father Francis Fernandes' death; 1603, superior at Chandecan, Bengal; left Bengal, January 1604; writes to the General (Cochin, 30-11-1605); 1608-09 at Goa; two years Procurator of the Malabar Province; left Goa, 15-2-1620, as Superior of the Mogor Mission; 1623, Vice-Rector of S. Thomé, Mylapore; 1627-28, at the College of Colombo, Ceylon; d. in Malabar, 3 (April ?), 1634. Cf. Besse, *Catal.* of Ceylon, 1913, p. 16; Sommerv., II, 60; VIII, 1896 (who makes him Procurator at Cochin. 1606-10); de Guilhermy, *Ménol, Portug.*, I. 399; *J. P. A. S. B.*, VII (1911), 17; XXI (1925), 51, 59; H. Josson, *Hist.*, I. 55-63; Idem, *Catal.*, 1921, pp. 48-49.—Note his name in Pimenta. John Andrew. He went to Pegu in March 1600.

[3] Philip de Brito de Nicote: successful adventurer, who perished miserably at the capture of Siriam (Pegu) in 1613; connected with the French Ambassador at Lisbon, Jacques Nicot, who introduced tobacco (*Nicotiana*) into France in 1560; see on him *Bengal Past and Present*, Vol. 30, July—Sept. 1925, pp. 52–76.

[4] Negapatam.

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estranham^te folguey com a de q' me fez M. por nella uer as m^tas charid^es q' me fazia. O S^or me chegue a t'po com q' as eu possa seruir. Pollos P^es sera V. P. enformado mais largo do q' eu nesta o faço das cousas desta terra. Eu inuerney em Pegù como là o P^e escreueria a V. P., postoq' elle me deixou, e veo invernar a Bengala, e o P^e Frey Belchior da Luz de S. D^os, q' hè m^to meu parente, me foy buscar là, e agora fica comigo, e como a terra ainda agora està reuolta, naõ mostra nada de sy, mas esperamos cõ o fauor de D's de como se aquietar auer algũ fruyto bom. Por onde tendo effeito, todas as uezes q' V. P. quizer mandar consolarnos, terey em m^ta estima, dando a ter^a desy cousa q' lhe arme. *Tambẽ me fara^a M. de me escreuer o q' bastarà p^a dedicar *hũa renda^a ao Coll^o de Coulaõ, porq' estimaria leuãdo. V. P. gosto, ser fundador delle por gozar dos priuilegios nos taes tempos. Com a reposta cõ fauor de D's p^a o anno o porey por obra. agora naõ mais q' encomendar me em suos oraçoẽs, e ficar rogando a D's q' o faça hũ dos seus escolhidos.

servant wishes you. I was immensely pleased with the letter which you kindly wrote to me, because it made me see your many kindnesses towards me. The Lord grant me the opportunity of repaying them to you. Your Paternity will be informed by the Fathers at greater length than I do herein about the affairs of this country. I spent the winter in Pegù, as the Father there [1] must have written to Your Paternity, although he left me and came to winter in Bengal: and Father Friar Belchior da Luz of St. Dominic, who is my very near relative (*q' he m^to meu parente*), came to seek me there, and is now with me;[2] and, as the country is still disturbed, it holds out no promise; but we hope with the help of God that, when it is pacified, it will yield some good fruit. Till this takes effect, whenever Your Paternity will be pleased to send us [Fathers ?] to console us, I shall consider it a great favour, the country yielding that which may suit them. You will also do me a favour by writing to me how much will suffice to provide an income to the College of Coulaõ, because I should esteem it a favour, if it gives Your Paternity pleasure, to be the founder of it, in order to enjoy the privileges in such times [as these] When I get your answer, I shall with God's help conclude the matter with-

[1] While in Pegu ?

[2] Cf. H. Josson, S.J., *Hist. de la Miss. du Bengale Occid.*, I. (Bruges, 1921), p. 61 n. 1.

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Escrita em Caranjà a 25 de Janro de 1601.
Felippe de Brito de Micete.

in the year. The only thing now left me is to commend myself to your prayers, and to keep praying to God that he may place you among his elect. Written from Caranja [1] on the 25th of January of 1601.
FELIPPE DE BRITO DE MICETE.[2]"

Respondy* lhe confirmandoo[a] nos bons propositos, e q'* bastariaõ trinta mil pardaos pera a fundaçaõ.[a] se a V. P. parece se deuia vir ao supor desta Prouª cõmissaõ pª * aceitar[a] esta fundaçaõ, porq' como Felippe de Brito esta longè, naõ se retarde tanto a conclusaõ, e se recreçer alguã duuida, q' se perca a occasiao.//

I answered him, confirming him in his good resolution, and telling him that thirty thousand pardaos would suffice for the foundation. Since Felippe de Brito is far away, if Your Paternity is of opinion that the Superior of this Province is to be commissioned to accept this foundation, let the decision not be so long delayed, and any doubt raised, that the opportunity be lost meanwhile.

22. Do Collegio inchoado de Tutucorin, e sua costa de Pescaria senaõ offereçe mais q' a instãçià q' nos tem feito o Visorey sobre passarẽ algũs d'aquelles pouos christaõs pera Ceilaõ juntamte cõ os Pes q' he o principal intento de s.sria, aquẽ temos satisfto, mostrandonos prontos de nossa pte pª obedeçer, mas todauia sem nenhũ aggrauo dos Pes de S. Frco. *O Pe Alexandre Leny Ror da Pescaria[a] fez sobre este negoçeo hũa junta cõ os Patangatins (q' saõ as cabeças dos christaõs) e como o capitaõ

22. Concerning the *Collegium inchoatum* of Tutucorim[3] and its Fishery Coast, there is nothing to mention except the request made to us by the Viceroy, that some of those Christians should go over to Ceilaõ together with the Fathers, which is His Lordship's chief design. We have satisfied him by showing ourselves ready on our part to obey, without however giving any trouble to the Fathers of St. Francis. Father Alexandre Leny,[4] the Rector of the Pescaria, held a meeting about this point with

[a] Passages from * to [a] were underlined in Rome.
[1] Caranja, higher up the Karnaphuli than Dianga, the Portuguese bandel, was within about a league from Chittagong. Cf. H. Josson, S. J., *op. cit.*, I. 57-58.
[2] Read: de Nicote.
[3] Tuticorin.
[4] "P. Alexander Leni, Ital." left Lisbon in 1586 (*Franco*); a Roman; Rector of the College of Tuticorin and the Fishery Coast, 1600-04; at Goa, 1610. Cf. Besse, *Catal.* of 1912.

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de Manar, e Ouuidor geral das q^las^ p^tes^ sobre esta pretẽçao do Sor Visorey.* Resoluerão se os Patangatins q' se lhes dessẽ hua p^te^ dé Ceylaõ, e boas terras maritimas, e nomeadam^te^ *o R^no^ de Jafanapataõ,[a] e fossẽ com elles os P^es^ da Comp^a^ iriaõ de sua geraçaõ colonias a pouoallas,* doutra man^ra^ naõ.[a] Da p^te^ d' Elrey de *Jafanapataõ naõ auera repugnançia,[a] porq' nos deseja m^to^ em seu R^no^, e* mo mandou pedir q'n passey por Manar.[a]

the Patangatins (who are the chiefs of the Christians),[1] and with (?) the Captain[2] of Manar and Auditor General (*Ouuidor geral*) of those parts, as regards this project of the Lord Viceroy. The Patangatins decided that, if they gave them a part of Ceylaõ and good lands on the sea-coast, and in particular the Kingdom of Jafanapataõ, and the Fathers of the Company went with them, colonies of their people would go to settle in them, not otherwise.

auera resistençia da p^te^ *dos P^es^ de S. Franco[a] os q^es^ sò com a fama de auerẽ de ir P^es^ nossos p^a^ certas p^tes^ de Ceylaõ q' o Visorey apontou, andaraõ discorrendo por ellas cõ// m^ta^ diligençia leuantando cruzes p^a^ se confirmarẽ mais na possẽ, o q' naõ deixa ja de ser fruito de nossos P^es^ de S. Paulo, como o era do mesmo Apostolo preso pregarse Christo per emulaçaõ.* Sem embargo disto o B'po de Cochim em cujo districto cay Ceilaõ, religioso de S. Franco[a] insiste em irẽ a Ceilaõ P^es^ da Comp^a^, e quer diuidir aquella grande ilha em duas p^tes^ antre

On the side of the King of Jafanapataõ there will be no opposition, because he wishes us much in his Kingdom, and he caused it to be asked of me when I passed through Manar.[3] There will be opposition from the Fathers of St. Francis, who, simply at the news that our Fathers were to come to certain parts of Ceylaõ which the Viceroy appointed, went running about them with [4]great zeal, raising crosses in order to strengthen the more their claims to possession; nevertheless it is now the fruit of our Fathers of St. Paul, as it was also of the said Apostle himself, when a captive, that Christ is preached out of zealotry. In spite of that, the Bishop of Cochim,[5] a Religious of St. Francis, under whose jurisdic-

[1] Patangatin. Mgr. S. R. Dalgado, *Gloss. Luso-Asiático*, Coimbra, 1921, I. 188, explains it as Tamil, *paṭṭan kaṭṭi*, chief of a Parava village.

[2] I propose to read *e com o* instead of *e como o*, as the sentence beginning with *e como o* would be incomplete.

[3] In 1598-99, on his visit from Goa to the South, as far as S. Thomé, Mylapore.

[4] New page; verso of leaf.

[5] Dom Fr. André de Sta. Maria, Bishop of Cochin, 1588—1610; resigned in 1610 and went to Goa; d. at Goa, 10-11-1618.

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os religiosos de sua ordem, e os nossos. E patentemte diz q'. naõ auera conuersaõ sẽ os nossos,* e q' tẽ desẽganado os Prelados de sua ordem,a q' façaõ aprẽder a lingoa,* porq' de 40. religiosos, somte hũ a sabe.a Esta agora aqui em Goa onde o fuy visitar, e se tornarà com o tirar a deuassa do Conde Visorey passado q' S. Mde manda tirar por elle. Parece q' instarà em leuar algú consigo mas naõ uejo como possamos acudir a tanto.

tion Ceilaõ falls, insists that Fathers of the Company should go to Ceilaõ, and he wishes to divide that great island into two parts between the Religious of his Order and ours. And he says openly there will be no conversion[1] without ours, and that he has disillusioned the Prelates of his Order, to make them study the language, because of 40 Religious only one knows it. He[2] is now here at Goa, where I went to visit him, and he will go back after making (?) the enquiry about the former Count Viceroy[3] which His Majesty orders to be made through him. It seems he will insist on taking someone with him, but I do not see how we can satisfy so many claims.

23. Na costa de Choromandel residem os nossos somte em Negapataõ, donde vaõ visitar as outras Igrejas della, no mesmo Negapataõ ouue mta discordia ciuil q' se acabou com mortes exemplares que deu a algús culpados o Ouuidor geral q' tambem esteue à morte atrauessado cõ hú * pelouro.a Este homẽ se queixou ao Visorey dos Nossos ajudandoo com seu testimunho o Guardiaõ de S. Franco, ao q̃l tanbem tiraraõ cõ hú pelouro, as queixas eraõ fundadas em se acolherẽ os omiziados a nossa casa, e fazendo algũs do

23. On the Coromandel Coast ours reside only at Negapataõ, whence they go on visits to the other Churches of the coast. In the said Negapataõ there were great civil discords which were put an end to by the exemplary deaths inflicted on some of the culprits by the Auditor-General, who was himself brought to death's door, having been shot through with a bullet. This man complained about Ours to the Viceroy, the Guardian of St. Francis, who was also shot at with a bullet, helping him with his testimony.

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[1] Of the natives.

[2] The Bishop of Cochin ?

[3] Dom Francisco da Gama, Conde de Vidigueyra, 16th Viceroy; left Lisbon, 10-4-1596; arrived at Goa, 22-5-1597; governed 3 years and 3 months; returned to the kingdom. (M. Xavier, *op. cit.*, p. 70.) Under § 14 we heard of unjust prohibitions passed by him, which his successor removed on his arrival.

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gouerno sobre isto grandes escarcéos, tudo se desfez facilm^te nẽ sey atègora q' tivessẽ os Nossos nesta p^te culpa algũa.

24. O Collegio inchoado de S. Thome teue algũa desconsolaçaõ pollas condicoẽs de dous, ou tres q' naõ le concorreraõ com q' o R^or q' [hè] o P. Nicolao Leuanto, teue algũs desgostos, mas tudo cousa leue, e q' com qualquer troca se comporà.

25. A missaõ de Bisnaga se prosegue, e de mil pagodes, q' Elrey de Bisnaga lhes mãda dar cada hũ anno, lhe saõ ja pagos este, mil cruzados; o Visorey escreueo ao Principe dando lhe nouas de sua chegada, e as diuidas graças por ter dado tal entrada à Fé, e feitos tantos fauores aos P^es auizey os q' o mouessẽ mandar embaixada p^a cõ ella se corroborarẽ mais estes principios da prègaçaõ do Evangelho, assy o tem feito, e estauaõ nomeados embaixadores com ricos prezentes, e vẽ cõ os embaixadores os P^es Simaõ de Sà, e Belchior Cout^o, os q^es de

The complaints were founded on the fact that the condemned men took refuge in our house, and some of the government exaggerated this greatly. The whole thing collapsed easily, and I do not know yet that Ours were to blame in the matter.

24. The *Collegium inchoatum* of S. Thome had some annoyance through the conditions of two or three who did not give it their concurrence. On this account the Rector, who is Fr. Nicolao Levanto,[1] had some worry; but it is a small matter, which will be settled through some compromise.

25. The Mission of Bisnaga[2] continues, and of a thousand pagodas, which the King of Bisnaga orders to be given them every year, a thousand cruzados have already been paid to them this year. The Viceroy wrote to the Prince,[3] giving him news about his arrival, and duly thanking him for having given such an entrance to the Faith and conferred such favours on the Fathers. I advised them to get him to send an embassy, thereby to strengthen the more these beginnings of the preaching of the Gospel. They have done so; and ambassadors were appointed with rich presents. With the ambassadors come Fathers Simaõ

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[1] "P. Nicholas Levanto, Gen." left Lisbon in 1593 (*Franco*): professed of 4 vows; 1600-01 at Negapatam; 1601; 1603-10, Rector of S. Thomé, Mylapore; 1610, Vellore; 1611, Cranganore; 1618, Rector of Malaca; d. at Malaca, 20-5-1618. (Besse, *Catal.* of 1914.)

[2] Vijayanagar.

[3] The heir-apparent ?

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caminho haõ de visitar * o Principe daq^le R^no q' instantem^te pede P^es^a offreçendo o temporal p^a juntam^te verẽ a disposiçaõ q' ha na sua cidade p^a se fazer fruito.

26. De Bengala veyo este anno aquy a Goa o P^e Belchior da^oseca pedir companh^ros p^a aquellas nouas empresas, e ainda q' cõ a missaõ de Japaõ estauamos exhaustos, e resolutos em ao mais lhe darmos hũ só companh^ro p^a q' naõ tornasse só. foy tanta a instancia q' fez o Visorey, q' nos ouuemos d' animar a fazer *secundum ultimum potentiæ*. Naõ queira V. P. *mais q' chegar o Visorey da India^a diante do Arcebpó, e Bispo d' Angamale, e outros a me dizer q' de grilhos mo pediria; cruzeime dizendo q' a Comp^a era sua. s. s^ria mandasse, disposesse etc. Naõ se contentaua o P. cõ menos de quatro companh^ros de Sà [1] and Belchior Continho,[2] who on the way must visit the Prince of that kingdom, who is earnestly asking for Fathers and offering the income (*o temporal*); at the same time they must examine what disposition there is in his city for yielding fruit.

26. From Bengala there arrived here at Goa this year Father Belchior da Fonseca [3] to request companions for those new enterprises, and, though the Mission of Japaõ had exhausted us and we were determined to give him at most only one companion, that he might not return alone, yet the Viceroy insisted so much that we had to muster up courage to do *secundum ultimum potentiæ* [our utmost]. Let Your Paternity know that the Viceroy of India went so far as to tell me before the Archbishop [4] and the Bishop of Angamale [5] and others that he would request me with chains. I was surprised and said that the Com-

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^a Passages from * to ^a were underlined in Rome.

[1] Simon de Sà: b. at Guardia, 1560; entered 1574; taught grammar; left for India, 1586; 1600-04 at Chandragiri, as preacher and confessor; 1604-06 at Paliacate; 1607, Rector of the College of the Serra; 1608-09, Rector of the College of Negapatam; 1609-10, Devanapatam; 1610-11, Rector of the College of S. Thomé; d. perhaps at Chaul, 1614. Sommervogel, VII. 354; IX. 1789; Besse, *Catal.* of 1914.

[2] Melchior Coutinho; b. at Coimbra, 1578; admitted, 1586; taught grammar; left for India, 1592; Superior at Chandragiri, 1601; Chandragiri, 1602-04; preacher and confessor, *ibid.*, 1604; Vellore, 1605-10; d. at the Residence of Vellore, 6-7-1610 (cf. Annual Letter of 1610). Sommervogel, II. 1539; IX. 138; Besse, *Catal.* of 1914.

[3] "Da ° Seca" in the MS.

"P. Melchior Fonseca, Lus." left Lisbon in 1595 (*Franco*); b. at Linhares, Portugal, 1554; received, 1573; went to India; minister 11 years; socius of the Provincial; reached the Bengal Mission, 7-9-1599; goes to Goa, 1601; returns to Bengal, 1601; d. at Chandecan, Bengal, 1-1-1603. Cf. Sommervogel, IX. 351; Josson, *Hist.*, I. 55-62; Id., *Catalogus*, 1921, pp. 48-49; *J. P.A.S.B.*, 1911, 34. Sommervogel's statement about "11 years minister" is perhaps incompatible with other known dates.

[4] D. Aleixo de Menezes.

[5] Bishop Francisco Roz.

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de Goa se partio com tres, *e muy escolhidos,[a] os P^es Andre de Nabais, Bras Nunez, Natal Salerno, e foy recado a S. Thome p^a de là ir o P. Simaõ de Sà, q' todauia naõ foy por ser partida a Galeota de Pegu no mesmo dia em q' chegou o recado. //

27. Todauia, porq' as empresas naq^las p^tes saõ de m^ta importancia pera o seruiço diuino p^a q' os religiosos ao diante nos naõ estoruassẽ nelle, alegando posses, como custumaõ, postoq' sempre là andaraõ de leuante, me pareçeo q' deuia o Visorey requerer NN. P^es p^a as taes impresas, em forma q' ficasse memoria autentica disso p^a o futuro. Assy o fez s. s^ria escreuendo me hũa carta, o original daq^l

pany was his, that His Lordship could order, dispose, etc. The Father was not satisfied with fewer than four companions. He left Goa with three, quite picked subjects: Fathers Andre de Nabais,[1] Bras Nunez[2] and Natal Salerno,[3] and the order was sent to S. Thome that Fr. Simaõ de Sà[4] should start from there; however, he did not go, because the Galliot of Pegu had left the very day when the order arrived.[5]

27. However, since the enterprises in those parts are of great moment for God's service, lest the Religious should obstruct us in it later, alleging possession, as is their wont, although they were always unsettled there (*andaraõ de leuante*),[6] it seemed to me that the Viceroy had to request our Fathers for such enterprises in due form, so that an authentic record of it might remain for the future. His Lordship did

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[1] "Andreas Nabais, Lus." left Lisbon in 1590 (*Franco*); "Andreas, Novais, Lus." left Lisbon in 1593 (*Franco*); b. at Funchal, 1564; received 1587; in Bengal, 1601; wrote from Bengal, 18-1-1602, and 25-1-1602; left, Bengal, 1603; prefect of the Church, Cochin, 1604; d. at Bassein. 16-2-1615. Cf. Besse, *Catal.* of 1919; Josson, *Hist. de la Miss. du Beng Occid.*, I. 57-59, and Id., *Catalogus*, 1921, 48-49.

[2] "P. Blasius Nunes, Lus." left Lisbon in 1597 (*Franco*) : b. at Crato, Portugal, 1571; admitted, 1588; reached Bengal, 1601; two months at Chandecan, 1601; goes to Arakan with Salerno; leaves Bengal, 1604; returns to Bengal, 1609 (?); in Sandip Island, 1610-11; d. at the bandel of Chittagong, 1612, while alone there. Cf. Josson, *Hist.*, I. 57-65; Id., *Catal.*, 1921, pp. 48-49; *J.P.A.S.B.*, 1911, pp.16-17.

[3] "P. Nadal Salerno, Siculus" left Lisbon in 1600 (*Franco*); b. at Trapani (Sicily), 1573; admitted, 1590; arrived in Bengal, 1601; goes to Arakan with Nunes; left Bengal, 1604, for Siriam (Pegu); died 4-4-1607, on board Paul de Rego's ship, which took fire during an engagement against the fleet of the king of Arakan. Cf. Josson, *Hist.*, I. 57-65; Id., *Catal.* 1921, pp. 48-49; *J. P. A. S. B.*, 1911, pp. 16-17.

[4] Cf. above, under § 25.

[5] Other page; recto of leaf.

[6] Ready to quit (?). A Dominican, Friar Peter of Lisbon, had been one year and a half in Pegu (Burma) before October, 1587. Cf. his letter in *J.P.A.S.B.*, Vol. XXI (1925), pp. 45-47.

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aquy fica no cartorio. a copia hè esta.

Por cartas. e informaçoẽs, q' tiue dos R^nos de Bengala, e Pegu, soube do grãde fruito e notauel seruiço de N. S^r, q' os poucos P^es da Comp^a q' por ordem de V. P. estaõ naq^las p^tes, fazem na doutrina, e instruçaõ, e exemplo q' daõ aos Portuguezes, e na conuersaõ dos Infieis. E q' saõ pedidos cõ instançia, e desejados dos Reis, e senhores infieis com promessas, e licença p^a se prègar o sancto evangelho, e se fazerẽ Ig^ras antre elles, e offreçendo o necessario p^a suas despezas. E porq' a cousa q' s. Mag^de princípalm^te sobre todas me encomẽda, e com q' espero de D's M's. em meu t'po, hè fauoreçer a christand^e e promouer o ministerio da conuersaõ, o q^l tanto serà mais auantejado, q^to mais se multiplicarẽ os ministros, e espalharẽ por diuersas p^tes, em especial se for gente de bom exemplo, como eu cuido q' saõ todos os da Comp^a, e por essa causa S. Mag^de na India lhes encarrega principalm^te o assumpto da conuersaõ. Polloq' rogo m̃, e encarrego a V. P. descarregando nesta p^te minha consciençia, q' mande m^tos religiosos da Comp^a àquellas p^tes e satisfaçaõ aos desejos daq^les Reys, e senhores, e prègando o sancto evangelho dillatẽ a s^ta Igreja por todas aq^las Prou^as especialm^te por Arrecaõ, Pegu, e Marteuaõ. E porq' confio em

so by writing to me a letter, the original of which remains here in the archives. Hère is a copy of it.[1]

"By letters and informations which I had from the kingdoms of Bengala and Pegu, I learned of the great fruit and notable service to Our Lord which the few Fathers of the Company residing in those parts by Your Paternity's order obtain [and render] by teaching, and instructing, and the example they give to the Portuguese, and by the conversion of the Infidels, and that they are earnestly invited and desired by the infidel Kings and lords, who promise to give them leave to preach the holy Gospel and build Churches among them, even offering the needful for their expenses. And, considering that the thing which His Majesty chiefly, and above everything else, recommends to me, and wherewith I hope for mercy from God in my time, is to favour the Christianity and promote the ministry of conversion, which will be furthered the more, the more ministers of the faith multiply and scatter to divers parts, especially if they are men of exemplary life, as I believe all those of the Company are (wherefore in India His Majesty entrusts chiefly to them the work of conversion), I therefore request and charge Your Paternity (thus discharging my own conscience in this matter) to send to those parts many Religious

[1] Marginally in Italian from another hand: *è ottima l'ra. è bene farne copia*, "this is a very good letter; it is good to make a copy of it."

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V. P. q' naõ falte a este meu requerim^to^ por ser tambẽ cousa tanto de seu instituto, e obrigaçaõ naõ digo mais. N^o^ S^r^ etc. De Goa, a 26. de Março de 1601.

of the Company, that they may satisfy the desires of those Kings and Lords, and by preaching the holy Gospel may spread Holy Church throughout all those Provinces, chiefly throughout Arracaõ, Pegu, and Martavaõ. And, as I trust Your Paternity will not fail to comply with this my request, because it is also a matter coming so specially under your institute and duty, I say no more. Our Lord, etc. From Goa, the 26th of March of 1601."

28. De Malaca senaõ offereçe mais q' ter se là aleuantado algũ poeira com o dito de hũ P^e^ em hũa prègaçaõ em materia de letras, por se matar no mesmo t̃po hũ Ouuidor, (aindaq' por excessos em outros negoceos) *e pareçer q' o nosso prègador dissera ser licito matar *authorit^e^ priuata*[a] ao iniusto iulgador, naq^l^ prègaçaõ se tinha achado o Ouuidor q' digo, e dahy a pouco mataraõ, o q^l^ se tinha retirado p^a^ o most^ro^ dos Frades Dominicos, os q^es^ exagitaraõ este dito do nosso prègador, aindaq' cõ tom de denunciaçiaõ à Inquisiçaõ informou. disto *o R^or^ mas tam confusam^te^ como eu[a] aquy o faço. tenho lhe escrito mandẽ informaçaõ bem destincta p^a^ por o remedio q' cõuem.

28. About Malaca there is nothing to be said except that some dust was raised there on account of the saying, of a Father at a sermon on a point of learning, because an Auditor (*Ouuidor*) was killed at that time (although for excesses in other matters); and it seemed our preacher had said it was licit to kill on one's private authority an unjust judge; the said Auditor had been present at this sermon, and he was killed a little later, when he had retired to the monastery of the Dominican Friars, who exaggerated this saying of our preacher and even wanted to denounce him to the Inquisition. The Rector gave information about this, but as vaguely as I do now. I have written to them telling them to send very distinct information, so that a suitable remedy may be applied.[1]

29. Acerca do Maluco

29. Concerning Maluco we

[a] Passages from * to [a] were underlined in Rome.

[1] Marginally in Italian: *è cosa grauissa*, "this is a very serious matter."

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estamos esperando este Março o q',tem soccedido cõ a chegada de NN. P^es, e cõ o socorro q' lhes terà mandado o capitaõ mór Andre Furtado de Mendoça, e porq' atègora estiueraõ as cousas daq^las p^tes muy reuoltas, naõ pareceo q' era t'po de pòr em ordẽ a visita q' em meu// nome tinha f^to o P. Christouaõ da Veiga deixando correr tudo na mesma forma em q' o P. o deixou, o q' se podera fazer como soubermos o estado em q' ficaõ Amboyno, e Tydore com suas residençias, e cõ isto dou fim a esta p^ra carta encomendando me na bencaõ, e s^tos sacrificios de V. P. de Margaõ p^ro de Dezembro de 1601.

D. V. P. filho ẽ o ser^o [*sic*]
Nicolao Pimenta.

expect this March[1] to get news of what happened with the arrival of Our Fathers and with the help which the Captain-in-Chief Andre Furtado de Mendoça[2] must have sent them; and, since until now the affairs of those parts were very much disturbed, it did not seem to be the proper time to put in order the visit which Father Christovaõ da Veiga[3] had made in my name,[4] but to let things run on in the same shape in which the Father found them; it will be possible to do so[5] when we shall know how things stand at Amboyno and Tydore with their residences. Herewith I conclude this first letter, commending myself to Your Paternity's blessing and holy Sacrifices.

From Margaõ, the first of December of 1601.

Your Paternity's son and servant,
Nicolao Pimenta.[6]

30. Pareceo me acrecentar a esta a copia de hũa q' Elrey m' escreueo este anno sobre nossas cousas, e em particular sobre as missoẽs do Catayo, & Bisnaga peraq' V. P. veja quãto S. M^de as fauoreçe. He verdade q' por reposta de hũa

30. I thought it good to add to this letter a copy of a letter which the King[7] wrote to me this year about our affairs, and in particular about the Missions of Catayo and Bisnaga, so that Your Paternity may see how much His

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[1] The coming March, 1602, no doubt.
[2] See on him § preceding § 11.
[3] "P. Christophorus Viega, Cast." left Lisbon in 1583 (*Franco*); he must be the Christopher de Vega, who with two companions went to Akbar's Court at Lahore in 1590-91. Cf. *J.P.A.S.B.*, 1910, 527; 541.
[4] New page; verso of leaf. [5] Put things in order.
[6] These two last lines, coming at the end of a big blank space, are in a different writing, which we must take for Pimenta's; the rest is in a beautiful handwriting.
[7] Philip III of Spain and Portugal (1598–1621).

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em q' o P. Prl o informaua da inquietaçaõ, & trabalho q' nos dà o cargo do hospital de Goa lhescreue, a elle outra em q' diz q' aindaq' isso assy seja, hè tam grãde o seruiço q' a Compa nisso faz a D's, q' hà por seu seruiço, q' naõ somte tenhamos cargo do hospital de Goa mas tambẽ dos de todas as outras cidades, & fortalezas, & mãda cõ instãçia q' tornemos a tomar o cuydado da fortificaçaõ de Damaõ, e sobre hũa cousa, e outra instaraõ os sores Visorey, e Arcebpo o P. Prl (q' tomara naõ ter espertado quẽ dormia) auiserà V. P. do q' se tẽ respondido.

Visitador da Compa de Jesv. Eu Elrey vos enuio mto saudar. Receby vossa carta de 12 de Nouẽbro de 99. E vos agradeco. o q' me dizeis sobre minha successaõ nestes Rnos e senhorios por morte d' Elrey meu sor, q' D's tem. Todas as cousas q' me foraõ apresentadas pellos dous religiosos q' vieraõ na armada do anno passado. tocantes a Compa mandey uer. e tenho prouido, nellas na forma q' sabereis do Visorey. Aires de Saldanha a q' encomẽdo mto encareçidamte fauoreça as cousas da christandade dessas partes, e assy as do uossa Companhia. ẽ tudo q' ouuer lugar, como confio q' fara, e tiue cõtẽtamto de se ter descuberta, aquella christãde tam antiga no Catayo de q' me dais conta de q' se naõ

Majesty is in favour of them. It is true that in answer to a letter in which Father Provincial told him of the annoyance and trouble which the burden of the hospital at Goa gives us, he wrote to him saying that, even if that be so, so great is the service rendered in this to God by the Company, whose object it is to serve Him, that we should take charge not only of the hospital of Goa, but also of those of all the other cities and fortresses, and he ordains urgently that we should again take care of the fortification of Damaõ, and the Lords Viceroy and Archbishop insisted on both points. Father Provincial—I wish he had not waked those who were asleep (?)—will tell Your Paternity what has been answered.

"[To the] Visitor of the Company of Jesus.—I, the King, send you my best greetings. I received your letter of the 12th of November of [15]99. And I thank you for what you tell me about my accession to these kingdoms and domains through the death of the King my Lord, who is with God. I ordered that all the things concerning the Company should be shown me which were presented to me by the two Religious who came in last year's fleet, and I have provided for them in the form which you will know from the Viceroy, Aires de Saldanha, to whom I recommend very earnestly that he should favour the things of the Christianity of those parts, and also those of your Company, in every-

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teue notiçia atègora: e q' Elrey de Bisnaga tẽ dado ẽtrada em seus R^nos^ p^a^ se nelles prègar o s^to^ Evangelho, de q' o Arcebp^o^ de Goa me auisou. encomẽdo uos m^to^ q' de vossa p^te^ acudais, cõ os obreiros necess^os^ assy pera a sementeyra, q' se ora começa naq^le^ R^no^ de Bisnaga como pera a conseruaçaõ da christand^e^ do Catayo, e confio q' o Visorey vos dará todo o fauor, e ajuda necess^ria^ p^a^ hũa, e outra cousa, e cõ elle, e o Arcebp^o^ de Goa tratareis esta materia, particularm^te^, pois hè tãto do seruiço de D's, e meu, e das mais q' uos pareçer deuo ter enfoŕmaçaõ me dareis conta p^a^ ẽ todas mãdar prouer como ouuer por bem. Escrita em Lisboa à 24. de Jan^ro^ de 1601.

Rey.

thing for which there is an occasion, as I trust he will. And I was pleased to hear of the discovery of that so ancient Christianity in Catayo of which you give me an account, of which there was no knowledge heretofore, and that the King of Bisnaga has thrown open his kingdoms for preaching in them the holy Gospel, which the Archbishop of Goa advised me of. I greatly recommend to you that on your part you should furnish the necessary labourers both for the sowing now beginning in that kingdom of Bisnaga, and for the maintaining of the Christianity of Catayo, and I trust that the Viceroy will give you all the favour and help necessary for both objects. With him and the Archbishop of Goa you will discuss this matter, particularly, since it tends so much to the service of God and mine; and, as for the other matters which you think I ought to know of, you will inform me, so that I may order to provide for them as I shall judge good.

Written at Lisbon, the 24th of January of 1601.

King."

[The End.]

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Eulogy of Father Jerome Xavier, S.J., a Missionary in Mogor.

(*1549–1617.*)

Translated from the Spanish by the Rev. H. Hosten, S.J.

The following eulogy of Fr. Jerome Xavier is translated now for the first time into English from *Chrono-Historia de la Compañia / de Jesus en la Provincia / de Toledo... / ... / por el P. Bartholome Alcazar / de la misma Compañia / ... / Segunda parte,*[1] a folio volume printed at Madrid in 1710. The Spanish text was copied for me by Brother H. Petitjean, S.J., in July 1914, from the volume in the Collegium Maximum of Louvain, and was collated by the Rev. A. Lallemand, S.J., both of whom went to their reward during the Great War.

The eulogy occurs under Decade III, Anno VIII, Cap. III, and goes from p. 203 to p. 216, the 8th year of the 3rd Decade corresponding to A.D. 1568, when on the 9th of May Fr. Jerome Xavier entered the Novitiate. It contains 6 letters not otherwise accessible, and bearing the following dates: Goa, Nov. 12, 1593; Kashmīr, Sept. 1, 1597; Lahore, Aug. 2, 1598; Agra, Sept. 14, 1609; Chaul, Dec. 4, 1615; and Goa, Jan. 5, 1617.

I must thank F. Cotta, Esq., of Calcutta, for improvements made in my translation.

St. Joseph's College, Darjeeling,
May 6, 1919.

[P. 203] Decade III, Year VIII, Chapter III.

§ 1. *Eulogy of Father Jerome (Geronymo) Xavier, Apostolic Missionary of the Mogor.*

On the 9th of May,[1] was received a very illustrious relative of *St. Francis Xavier*, who, with the intention of following his footsteps in the spiritual conquests of heathenism, changed the title of his noble family for that of *Xavier*, considering it of triumphal renown in those eastern regions, and of better omen than the change of 'Scipio' to 'the African,' with which, in auspicious announcement of victory, Caesar honoured the general of an army to whom he recommended the subjection or conquest [of Africa].

[1] 1568.

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This gentleman[1] was called *D. Geronymo Espeleta*, of the house of *Beyre*, a family well-known in the Kingdoms of Navarre and France. On taking the habit of the Company, he exchanged this title against that of *Xavier*, resolving and trusting to imitate [P. 204] his holy uncle.

He enriched himself with letters and virtues in our Province of Toledo, in which he lived thirteen years, until in 1581 he embarked for East India,[2] where he made his Profession of four vows, was Rector of the Colleges of Bazain and Cochin, Master of Novices, and Superior of the Professed House of Goa.

In the year 1594, fired with higher ambitions, he undertook the Mission of the Mogor, being in it a most worthy successor of our illustrious martyr, *Fr. Rodolfo Aquaviva*. He lived many years at Agra and Lahore, the two Courts of that Monarch who boasted of being a descendant and heir of the famous Tamorlan. His empire, inhabited by a mixture of Indians, Gentiles and Moors, and situated between the Indus and the Ganges, borders on Persia, and occupies many regions of Tartary or Asiatic Scythia and no small part of India.

Here he employed himself with incredible zeal in converting and instructing Gentiles and Mahometans, and he succeeded in conferring the waters of Holy Baptism on four close relatives of the Emperor. His life was exposed to very great dangers, in which he displayed his Christian fortitude. The people stoned him at the Court of Lahore. At the wicked suggestion of an Armenian apostate, he ran another danger no less great, because he defended courageously the purity and chastity of the Christian faith, resisting and opposing the Armenian's desire to marry the sister of his deceased wife.[3]

That barbarian Prince was very intelligent, but dishonest and covetous of honour. Hence, not satisfied with the sects of Indians, Gentiles and Moors, existing in his dominions, and his carnal appetites not allowing him to embrace the law of Christ, he dared set himself up as the author of a new sect, founding it on gentile rites and borrowing nothing from that of Mahomet: previously he had made different experiments to ascertain which law was the best, and he presumed that, with no other help than human industry, he would succeed in the attempt, which was as rash as it proved vain. The Armenian apostate at once joined that sect, and he asked the Emperor as a favour to force *Fr. Geronymo Xavier* to embrace it. But our valiant champion,

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[1] Caballero.

[2] He embarked in 1581 with 14 companions: 10 Portuguese, 2 Spaniards and 2 Italians. (A. Franco, *Synops. Annal. S.J. in Lusitania*, 1726, p. 128.) They left Lisbon on April 8, 1581, in 5 ships. The *S. Lourenço*, in which came the Viceroy D. Francisco Mascarenhas, reached Goa on Sept. 24, 1581. Cf. Manoel Xavier, S.J., *Compendio Universal....* Nova Goa, 1917, pp. 32; 69.

[3] Cf. my *Mīrzā Zū-l Qarnīn* in *Mem. Asiat. Soc. Bengal*, Vol. V (1916).

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nothing daunted, and heedless of the unjust order, publicly condemned and abominated the King's sect, ready to give his life for so righteous a resistance, and astonishing with his firmness the Grandees of the kingdom. The King resented extremely his holy freedom, but he dissembled his vexation and repressed his anger.

On many other occasions did this apostolic man give proofs of his high-mindedness, trampling upon the unjust schemes of that barbarous Prince, and God watching over him with special care in order that he might make greater fruit in those souls, until he returned to Goa in the year 1617

During all those many years this fervent Jesuit corresponded by letters with *Fathers Thomas de Ituren* [1] and *Francisco de Benavides*, of our Province. Six of these have been preserved in the original, the first, addressed to *Father Benavides*, in the archives of Alcala; the other five in the archives of our Imperial College. And, as in these he dwells to some extent on his successes and on those of several other members who had gone to the East from this Province, while adding to those informations others of a geographical and curious nature concerning those parts, we have judged it good to communicate them to our Readers.

The tenour of the first is as follows:—

"I do not know what to say, or how to deceive myself: [P.205] for I did not find *Fr. Francisco de Benavides* on the list of the dead, nor did I find among the letters any letter of his. It is missing, and death alone, I think, can explain its absence. The reason must be that you write only by one way, since, out of five ships, only one, in which six of ours were coming, was missing this year, and the others brought no letter of yours.[2]

"That shows you do not know the dangers of this sea. For, though I wrote to you almost every year in triplicate, I doubt whether the last one reached you, or whether you will get this present letter of mine, because out of five ships which left two years ago only one reached: another was caught by the English; another, to escape the same fate, was burnt by the Portuguese, and of the other two there is no trace.[3] Of the five

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[1] Thomas de Ituren, born at Ituren, in the Pampeluna Diocese, taught philosophy and moral and scholastic theology; died on April 19, 1630, aged 75 years, being superior of the Professed House of Toledo. Cf. de Backer, V (Liège, 1859), 338.

[2] Neither M. Xavier nor Franco shows that anything untoward happened on the journey out to the 5 ships which started from Lisbon on April 4, 1593. The fleet carried 6 Jesuit Missionaries.

[3] The 5 ships which left Lisbon on Apr. 4, 1591, were unfortunate on the journey home. The *Madre de Deos* was taken by the English; the *S. Bernardo* disappeared; the *Sta. Cruz* was burned by her own crew, lest she should fall into the hands of the English; only the *S. Christovam* reached Portugal. (M. Xavier, *op. cit.*, p. 35.)

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ships which left a year ago, one was lost—though many on board were saved and arrived with much trouble across the lands of the Cafres, near the Cape of Good Hope; two arrived at Mozambique; about the two others we do not know whether they reached.[1] This sea is very troublesome and very great. I say this in order that, if you get no letter, you should not think I forget you or am dead.

"I am quite well, thank God, in this Professed House of Goa; still, I have less quiet here than when I was at Cochin, for there is more work here; not only have I to manage the house, but, as the Father Provincial goes every year to visit parts of the North, or those of the South, the poor Superior of this house takes his place, and he has double work.

"But I do not say more about myself, because *Father Gil de la Mata*,[2] the bearer of this, will give you plenty of news. Coming from Japan this year, he passed the winter here and helped us very much with his sermons. We are quiet here, though troubled by the disturbances we hear from those (your) parts. God grant that the Congregation which takes place in Rome this month may put an end to it all. Be so kind as to write to me at length about that.

"I have little news to write to you. The news about Japan I leave to *Father Gil de la Mata*, who will tell wherever he goes how the persecution continues, and also the fruit which, for all that, Our Lord makes in those parts. Father Visitor[3] was well received by the Quambaco;[4] he sent him back to the Viceroy of India with another present in return. He sent it with this Father, and he [the Father Visitor ?] stopped in China

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[1] Five ships left Lisbon on April 7, 1592. On the way back, the *Sto. Alberto* was lost at the Cape of Good Hope; the *Nazareth* and the *Chagas* reached Mozambique. (M. Xavier, *op. cit.*, p. 36.)

[2] Franco mentions "P. Ægidius Martins, Cast." as leaving Lisbon in 1584; also "P. Ægidius Mata, Castell." in 1596 as going to the East from Lisbon, and Fr. L. Besse, S.J., left me a note saying he died at sea in 1601. 'Gil' corresponds to 'Ægidius.'

Fr. Besse's date should be 1600 or earlier. We read in Pimenta's letter of 1-12-1600 (Moguntiae, 1602, p. 113): "As regards the glorious doings in Japonia and the kingdom of the Sinae, I leave them to the ordinary Annual Letters of that Vice-Province, whence Fr. Ægidius de la Matta was sent the second time now as Procurator to Rome; but it is thought that the junk of Nuno do Mendoza, on which he had embarked, foundered before reaching Macao; not a trace of the shipwreck was left."

[3] Fr. Alex. Valignani, S.J., who had returned from Europe with the embassy of Japanese Christians. The meeting with Taicozama took place on March 3, 1591. Valignani presented letters from the Viceroy D. Duarte de Menezes (d. at Goa, May 4, 1588). He left Japan in February 1592. Cf. Crétineau-Joly, *Hist.....de la C. de J.*, II (1851), 399.

[4] The Quambaco (Jap. *Kuambaku*): prime minister, or regent of the Mikado under the old regime; equivalent to *Taicozama*. Cf. Dalgado, *Gloss. Lúso-Asiático*, II. 232.

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waiting for the Father Bishop [1] who was going; for it was important that he should not miss meeting him. The Viceroy [2] received the Quambaco's present and sent it to His Majesty, and he hopes to see and send him another present in return. God grant that that storm be stilled.

"Here the things of the Society are doing well. I hear from the Christianity of the Serra, [3] which they call of St. Thomas, that the fruit of Ours is much increasing. The numbers in it and in the Seminary of Vaipicota (about which I wrote many times to Your Reverence) [4] are greater than ever. The Archbishop [5] and others are more openly against us and against the Church, while the people are more than ever in our favour. Fifty-two are studying in the Seminary: seven or eight are Priests; others, Jamaxes (Deacons or Subdeacons); others, small boys; some learn Surian, [6] that is Chaldean; others, Latin; and all give many proofs of virtue. As I do not live in those parts, I shall not start writing about particular things. I refer you to the Annual Letter, which has many good points, both about the Christianity of St. Thomas [P.206] and about this one of Goa, where good and strongly tried conversions took place.

"Here in Goa the Father of the Christians (as they call the Father who takes care of the new converts) is *Fr. Francisco Hernandez*, [7] the brother of *Fr. Sebastian Hernandez*. He is a very zealous man, and much liked for his sermons and his manners by the Lord Viceroy, [8] with whom, by reason of his office, he is very frequently brought into contact.

"This last March, *Fr. Francisco de Vergara* [9] came in mediocre health from Malaca to Bazain to help the Rector.

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[1] Fr. Pedro Martins, S.J., who came to India in 1585, went to Rome and was consecrated Bishop of Japan, which he entered only in 1596.

[2] Dom Francisco Mascarenhas, Conde de Villa Dorta, 13th Viceroy, and 1st Viceroy sent by King Philip; arrived on Sept. 24, 1581, and governed till November 25, 1584, when he returned to the kingdom. (M. Xavier, *op. cit.*)

[3] Of the Malabar mountains.

[4] While he was at Cochin, we must presume.

[5] Mar Abraham.

[6] Syriac.

[7] The Fathers whose names follow must have been Spaniards. Fr. Francisco Hernandez appears to be the Missionary sent to Bengal in 1598, who died in prison at Chittagong on Nov. 14, 1602. Born at Huerta (? *Avertensis*), in the diocese of Toledo, he entered the novitiate at Alcala on March 20, 1570, and left for India in 1574. Cf. Sommervogel, III. 650; IX, 325.—There is however a Fr. Francis Fernandez who died in 1600, at the Bom Jesu, Goa. Cf. Pimenta's Annual Letter of 1-12-1600 (Moguntiae, 1602, p. 118). Some one (in Europe ?) confused him with the Bengal Missionary. As this Francis Fernandez was Minister when he died, and did not die in a native Mission, he cannot be the person referred to by J. Xavier.

[8] Dom Matthias de Albuquerque, 15th Viceroy, who arrived at Goa on May 16, 1591, governed 6 years. M. Xavier, *op. cit.*, p. 70.

[9] Francis de Vergara, not yet a priest, 'Boeticus,' came to India in 1574 (*Franco*).

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"*Fr. Juan Luis Soriano*, [1] a very good religious, but now old and quite white, is there in a Mission Church (*Iglesia de Christiandad*) and garden (*Quinta*) of the College.

"From *Fr. Antonio de Monserrate* [2] and his companion, *Fr. Pedro Paez*, [3] we got letters now from July of this year; they continue in their captivity [4] and have less hope of getting away; but they feel much consoled, and they maintain themselves and the captives in piety. In the Annual there is an extract from one of his letters: perhaps it will go with this one for Your Reverence. They think that the Governor of the country where they are, on completing his term of office, which will be soon, will take them to Jerusalem, to present them to the Holy House; for, although Moors, they do so; and his wife is kind to the Fathers. I think she is the daughter of Christian parents.

"About the Mogor [5] I wrote already that the Mission was destroyed, and how of the Fathers who came back one died this year, of poison, it is supposed, which was given him in the Church of the Christianity where he resided.[6] The other, whose name is *Christobal de Vega*, of the Province of Castile, is Superior of the House of Chaul, which is now besieged: [7] for the neighbouring Moorish King, irritated because Ours took much money from a ship of his, which was stranded near our lands, came to attack the city, and he will make us throw up the morsel before he cools down. He made a fortress on a hill near the sea, hoping to block the entrance to the city; but he does not stop any ship, although he bombards the city with much artillery, and of very big calibre. God protects us, for he has done us very little damage until now. But he can do us much harm: a few days ago, in spite of all his artillery, a ship had gone to the city by the river; but, when she got out, she paid double for it; they sank her. May God help us. Good *Fr. Vega* has much work (*travajo*) with those of the city and with the soldier guests; [8] he does much for them and is very much liked by all: all speak and write greatly in his praise.

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[1] One John Louis, a priest, 'Castellanus,' came to India in 1574 (*Franco*).

[2] Father A. Monserrate, a priest, 'Valent.,' came to India in 1574 (*Franco*).

[3] Pedro Paez, not a priest, 'Castellanus,' came to India in 1588.

[4] Both were prisoners at Sanaa, South Arabia, "where lived the Turkish Viceroy, an Epirote by birth. The Turks commonly call him Arnaut, after the chief town of his country; Ours call it Alessio." Cf. A. Monserrate, S.J., *Mongol. Legat. Comment.*, in *Mem. Asiat. Soc. Bengal*, III, p. 519.

[5] The Mogul Empire.

[6] Fr. Edward Leitão? Cf. *Journ. Proc. Asiat. Soc. Bengal*, 1910, p. 527.

[7] "P. Christophorus Viega, Castellanus," left Lisbon for India in 1583 (*Franco*).

[8] *Soldados huespedes*: soldiers who had been sent to the defence of the town.

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"From the Prester[1] we got letters speaking of the extreme abandonment of those Christians. Of two who were there, the Superior died; the one left is nearly seventy-three years old. The Father Provincial sent to them, four or five years ago, *Fr. Monserrate* and *Fr. Paez;* they did not reach. He sent them now two others this year. Would to God that they arrive.

"Commending myself to Your Reverence's Holy Sacrifices and prayers.

"From Goa, the 12th of November, [15] 93.

"Your Reverence's unworthy servant in Christ.

"*Geronymo Xavier.*"

* * *

[P. 207] § 2. *Journey which he made to the Kingdom of Caximir.*[2]

Four years later,[3] Fr. Xavier was already in the Mission of Mogor, and, following the Court of that Monarch, he had gone to the city of Caximir,[4] whence he wrote to *Fr. Ituren* the following first letter:—

"I was excused from writing this year; for Your Reverence will get this year a letter of your old friend *Fr. Pedro Paez*, whom God now brought back to India for glorious labours, and he is actually studying his theology at Goa. However, you will find some little time to read this letter of mine, considering that it comes from a friend, even from your still older friend.[5]

"We were at Lahor, the Court of King Equebar,[6] always enjoying good health. When spring[7] came, the King came to this Kingdom of Caximir, which he took ten years ago.[8] He was obliged to come away, because his houses were burnt on the Feast of the Resurrection, which was the time when he makes a solemn feast in honour of the sun, when it reaches the sign of Aries. They say that the King must have lost in that fire eight or ten millions of gold, in pieces of gold and silk, precious stones and very rich pieces which were burnt and damaged, and it is not known how such a fire originated. All affirm that it was a chastisement from God.[9] Not having houses enough to live in, and owing to the heats of Lahor, which are very great, he decided to come and pass the summer in this kingdom, this country being very cool. We came with

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[1] Prester John of Ethiopia.
[2] Kashmīr.
[3] Later than 1593.
[4] Srinagar.
[5] *Sabiendo es de amigo y aun de mas antiguo.*
[6] Akbar.
[7] *Verano*: now 'summer'; obsolete in the sense of 'spring.'
[8] Conquest of Kashmīr: 1586. Cf. V. A. Smith, *Akbar*, 1917, p. 457.
[9] On the fire in the Lahore palace. Cf. V. A. Smith, *ibid.*, p. 457 (Easter Day: 27-3-1597 O.S.), and p. 268.

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him, though he did not oblige us to come, and he was thankful to us for it.

"On the way we were in good health. How much trouble we had in getting through those mountains, which are much bigger than those of our Pyrenees! And, when we had passed one, there was another still worse. For eight or ten days we went from mountain to mountain, from snow to snow, and under great cold, though it was the end of May.

"When we arrived at the city and settled down, at once on the third or fourth day both of us,[1] of the Company, fell ill with fever, which lasted us more than two months, and I thought I should become consumptive. For, after I got cured and went about and ate well, I suffered continually night and day from a low fever, which gave me not a little pain and much anxiety; but, as I recovered my strength, it went away, and now I am already out of convalescence, although I enjoy the privileges of it. And the country is specially good for convalescent people: for it is very fresh as to climate, rivers, fountains, surroundings[2] and fields.

"It is a country which in olden times was provided with every kind of foodstuffs; now it is very much uncultivated and even depopulated, from the time that this King took it and governs it through captains who tyrannize over it, *et dum nimis emungunt, eliciunt sanguinem* (and bleed the people by their extortions). The people are very intelligent; they are Moors nearly all, and staunch Moors (*muy Moros*); but, speaking in general, they are very poor, and I never saw so much poverty among any other people. And they say that, before this King, they were all sufficiently provided with food, and so the want of money existing in this kingdom was not felt, for with very little they bought what was necessary for their existence. Now everything is wanting, for there are no cultivators on account of the violence done them. And, owing to the King's coming, [P. 208] they have more than twenty-five thousand additional mouths to feed, besides many horses and elephants. They ate whatever they had stored up; and so the poor folks suffer much and even perish.

"And, as it is an ill wind that blows nobody good, they throw their babies (*sus criaturas*) away in the streets, because of their poverty. The Christians and we picked up some, and, though we gave them nurses and milk, they did not profit by the care taken of them, as they were already worn out with hunger. Even that proved a blessing; for they died after being baptised and went to heaven *per viam sine impedimento*

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[1] Bro. Benedict Goes was with Jerome Xavier, Fr. Manoel Pinheiro remaining at Lahore. On Jahāngīr's illness after Xavier's recovery. Cf. V. A. Smith, *ibid.*, p. 269.

[2] *Salidas* : environs of a town.

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(by the way without obstacle), and so we considered our coming a very profitable move, on account of these lucky little creatures whom *suscitauit Dominus de stercore & puluere vt collocet eas cum Principibus populi sui* (the Lord raised from the dunghill and the dust, that they may sit with the princes of his people).[1]

"There is something (though of a different kind) which I must not omit to say, in order to give Your Reverence's pupils something to philosophise about. It is this, that at the extremity of the kingdom, on the south side, there is on a declivity, at the foot of certain mountains, a fountain of very good cold drinking-water, but a very rare [fountain] it is: for it is like this.[1] It is like a well, eight or ten palms deep, and as many broad; and it is square, the bottom and sides of it being entirely of big stones. At the bottom of the well there is another by the side; this one must be four palms deep and two palms square (*de ancho dos en quadro*). From this small well the water begins to spring and rise, until it reaches the level of the bottom of the well (for, as I said, that small well is four palms deeper than it); and, as the water always rises, it covers the entire bottom of the well, and then water begins to flow from a hole in the wall of the said well (on the south side), which is close to the bottom, and from here and from the said small well water flows so abundantly that it goes rising and rising until it fills the well to the brim, and then it flows away through a stone channel, which they have made for it, to conduct the water to a place where the women bathe, the men, mostly Gentiles, bathing with much devotion in the well itself. This rising of the water has its limit: for at a certain point—which is not always regular, the flow lasting sometimes longer, sometimes less long—it stops and begins at once to decrease and get lower, and to disappear through the same place whence it came. And when the flow stops and begins to decrease, many rush in to bathe with much devotion and fervour. This they do not dare to do when the water rises; for they think that, if anything is thrown into the water at that time, it stops rising. (But this is a fable: for the contrary was experienced when we were there.) When the water ebbs, it vanishes little by little till the whole well is dry and only the small well, which is deeper, contains water; but that also gets lower and lower, until it is quite dry too. And after a short time (*al cabo de rato*) the whole well is as empty and dry as if it had never had any water; and after eight or ten hours, or six, it begins to flow, to rise and to decrease. This happens three times, between night and day; some days, only twice. This flowing and ebbing is very slow and gentle, without any noise.

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[1] Cp. 1 Kings, II. 8.

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"There is still room for further speculation: for it does not take place the whole year round, but only during three months, namely March, April, May, with a difference of a few days more or less. The rest of the year the well is dry like the country [around]. The Gentiles relate a thousand fables about this phenomenon, which they attribute to their false gods. And near the well the ancients built for it a pagoda, something like a chapel, of great stones, but it is now falling to ruin. The Moors say that Avicenna[1] came to this kingdom, and that he used his great knowledge to make this fountain. I saw it, and I travelled more than fifteen leagues, and as many back, to see it.[2]

"I have nothing further to say for the moment, except that I recommend myself to Your Reverence's Holy Sacrifices and prayers.

"From this kingdom and city of Caximir, the first of September of [15] 97.

"This kingdom is 108 degrees[3] from East to West, and 34 from North to South.

"Your Reverence's unworthy servant in Jesus Christ,

"*Geronymo Xavier.*"

* * *

§3. *New information which he gives from the two Courts of Lahor and Agra.*

The next year, being at the Court of Lahor, he wrote to him the following letter:—

"You must already have my letter and the letter of your *Fr. Pedro Paez*; that notwithstanding, I shall write to you this one from Lahor, as last year I wrote to you from the kingdom of Caximir. But what shall I do, if it please God that neither the ships nor the letters arrive?

"My Father, we here in these Eastern parts see *quam magnus est Dominus Deus noster*[4] (how great is the Lord our God), who owns and rules such great countries, peopled by such different peoples and nations. For they come here from the most Eastern parts, those of Catayo, Tartary and Muscovy, and they relate various things about their countries. What rejoiced me greatly was what was told, eight days ago, to the prince,[5] and in our presence, by an honourable old Moor, who had been thirteen years in Catayo, which is where that famous great wall

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[1] I have not been able to identify the place of this strange well.

[2] Avicenna: b. at Kharmaithen, province of Bokhara, A.D. 980; d. at Hamadan, N. Persia, A.D. 1037.

[3] *Sic*:—*Este Reyno está 108. grados de Leste à Oeste, y 34. de Norte à Sur.*—Father Monserrate (*Mem. Asiat. Soc. Bengal*, III. 623) speaks of the Moghul Empire in 1591 as measuring 18 degrees of longitude and 21 of latitude.

[4] Cp. 2 Paral. II. 5.

[5] The heir-apparent, Prince Salīm, later Jahāngīr.

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separates China from Tartary. He says that in that kingdom many are Christians, and that the king who preceded the present one was a Christian. I postponed asking the particulars to another day, when I told him to come to that very place for our sake;[1] he did not come; I am going in search of him to inform myself at my leisure. What is certain is that there are many Christians there; I had heard it before; and they must be very rude (*agrestissimos*), since they are extremely far away, and at the end of the world, in the most Eastern part of it, where foreigners cannot penetrate at all, unless they first obtain permission from the king himself. Surely, if holy obedience were to send me with this little Persian which I also know, and which will be useful for the way, I should go quite boldly. But God knows whom he reserves for such an undertaking.

"Here all our work consists in clearing the ground of brambles and in sowing *super petrosa Maurorum, super spinas Gentilium*[2] (on the rocky ground of the Moors, on the thorns of the Gentiles). All listen very well, and it is wonderful how patiently they listen to the praises which Mahomet (*el maldito Mahoma*) deserves. They fear the King, who shows us favour, and he too listens many times to our things, and at times he hears what he does not like and dissembles. As these are beginnings, we are obliged to have patience *ut fructum afferamus*[3] (if we wish to bring forth fruit); building [P. 210] foundations means spending much stone and mortar, and not to enjoy the fruits of one's labour; but may God help and console us with certain fruit.

"I am in good health; better than in Spain, Portugal and India, *maxime* (especially) as regards the stone. *Laus Deo. Vtinam in spiritu ita sit* (Praise to God! Would that I were the same as regards piety). But, *spiritus est qui viuificat, caro autem non prodest quidquam.*[4] (It is the spirit that quickeneth; the flesh profiteth nothing.) The flesh brings cares and anxieties; and the poor spirit brings patience and sighs. *Adjuua igitur infirmitatem meam,*[5] *verbo et oratione, et vale.* (Help therefore my weakness, by word and prayer, and fare you well.)

"From Lahor, the 2nd of August of [15]98.

"Tell me what you may know about our country; how the Company is working, etc., and what you know about our Province, and write by two or three different ways. In every case, get me and send me an Alcoran in Latin[6] or in the vulgar tongue, for I cannot get it here except in Arabic, which I do not understand; and over there at Nurcia they must have it.

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[1] To the Prince's quarters? [2] Cp. Matth., XIII. 5.
[3] John, XV. 16. [4] John, VI. 64. [5] Cp. Mark, IX. 23.
[6] The first Jesuit Mission to Akbar's court had the Koran in Latin, Cf Monserrate, *Mem. Asiat. Soc. Bengal*, III. 563.

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Saltèm (at any rate), the Lords Inquisitors will have some. I recommend the same to *Father Benavides*; do not forget it by relying each on the other. I wish there came two or three!

"[Your] unworthy servant in Jesus Christ,

"*Geronymo Xavier.*"

To the same he wrote again from the Court of Agra another letter, which was as follows:—

"Your Reverence's letter was most pleasing to me, both because it was worth it, thanks to the many different items of news which you give me about that Province, and because it was the only one: for years now, not one has come from all the old friends. Neither *Benavides*, nor *Roxas*,[1] nor *Ortegas*, nor the rest, show signs of life. I could understand that the ocean had run dry, but not their inkstands, when there is question of writing to this great friend of theirs. God grant they be alive; if they are, I trust that, even if their letters do not come, they will not fail me with their prayers.

"Father mine, I am in good health, and the Lord be thanked who gives it, although I may say that my constitution has greatly lost in strength this year, and that it wishes to enjoy the privileges of old age;[2] and what is worse is that I can scarcely refuse them, for I find myself very weak, weaker every day. And, if the country, which is very healthy, did not help me, I should be worse.

"My work consists in going and coming to the King, and in throwing the hook into the water, hoping the fish will bite. But, *revera, Pater mi* (truly, my Father), it is a big thing; the conversion of souls requires much capital and strength. We deal with Moors, who agree with us about all that concerns the nature of God; and we come into conflict with them about that which we cannot prove with reasons, but only with miracles, which the Lord will work by whom and when it may please Him. Even so, we do not desist at any time: for when *Dominus virtutum*[3] (the Lord of hosts) wishes, everything can be done and be hoped for.

"As for the book of the Alcoran, I should value it much, although I had it translated here from Arabic into Persian, and from Persian into Portuguese.[4] Your scruple about communicating such a book to us is amusing, when we here are dealing from morning to night with these Moors about their things, so much

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[1] Perhaps John de Roxas, S.J.: b. at Toledo; entered the Society in 1569; taught, preached, and governed colleges; d. at Madrid on Sept. 29, 1605, aged 53. Cf. de Backer, VI (Liège, 1861), 573.

[2] Jerome Xavier was born in 1549.

[3] Ps. XXIII. 10.

[4] These two translations might be added to J. Xavier's bibliography. He was able to supervise the translation from Persian into Portuguese.

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so that even the bread we eat seems to have been kneaded with the water of Mahomet's Alcoran. However, for our greater satisfaction, I should prefer an old Alcoran, as such a one may be translated better; hence, I do not desist from my request, etc.

"Your Reverence asks me for news from this country. It is very healthy; I have never felt so well elsewhere as here. There are few fevers (*calenturas*), few illnesses; the country is very fruitful; the tyranny [P. 211] of the Mogores has ruined it; however, it is well provided with everything. The King is absolute Lord of all his kingdoms; and great and small have only as much land and property as he wishes to give them. To some he gives very great revenues, *e.g.* one hundred, two hundred, five hundred thousand cruzados; and he gives them lands to live upon, and to derive the said revenue from. But, when he gets angry, he deprives them of the lands and gives them to others; and so, during the time that some one holds certain lands, he squeezes out of them whatever he can, and the poor labourers desert them and run away, which is the reason why they are poorly peopled. There are other lands which the King reserves to himself; he farms them out to the highest bidder, and the lessees, in order to extract from them what they promised to pay and derive profit, rob the labourers and oppress them in a hundred ways, until they leave the lands and go away; and so they are less populated than they might be.

"The land is fertile: it yields two or three crops a year: some parts produce more wheat than others; but in all they eat wheaten bread, although the food of the common people is rice and butter. It seems impossible that there should be so much butter; but the fact is that no one eats without using butter. Let Your Reverence imagine a city with five hundred thousand souls. What a quantity of butter would it not consume, if no one in it did not eat it? And I say the same about rice.

"But even the animals are almost as great eaters as the men. There must be in this city three or four thousand elephants, the others being in the villages. Every day each one gets one *mano*[1] or one *mano* and a half, of rice or other food. Fancy there must be in this city more than twelve thousand horses, because nearly all go on horseback. You see what an amount of food they require, and their food generally consists of chick-peas (*garvanços*). Barley is not used; and the country supplies it all. And so I say that it is very fertile; it would be even more, if those who live on it treated it as proprietary lords.

"It has many mines of iron, of copper, and even of silver; but they are far. Copper mines there are: for there are some

[1] *Mān* (Hind.), maund.

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copper mines near this city,[1] where it is said they get thirty or more pounds of copper out of forty pounds of earth dug up. I scarcely believed it, however, but those who knew it well asserted it to me quite seriously. A Castilian miner, who saw them, affirmed the same to me, and showed himself greatly surprised.

"Cotton is the ordinary clothing of the country; and a man dresses very neatly on six or eight ducats, and lives at very small expense.

"Hence it is that there are very rich men among these Moors and Gentiles; they amass great treasures, which at the end, when they die, go to the King. For a captain to leave behind a million ducats is very common. There are captains and lords who have forty, fifty millions; but they do not profit by them during their lifetime, as they hide them; still less do they, when they die, because the King generally takes them; and if the heirs declare them *spontè* (of their own accord), they leave them a large part, *et è conuerso* (and conversely).

"They lack what is best, the truth. The law, the worship of God, everything is Mahomet's; but they keep their law very little in what runs counter to their appetites. Wine is forbidden them, and they drink it to excess; and, unless they get drunk, they fancy they have not drunk. They make wine from *jagra*, that is from the sugar-cane, and from the bark (*casca*) of a certain tree; with the same *jagra* they make vinegar; and they make the wine as strong as they like, [P. 212] strong enough to knock down a bull. They do not much use our grape-wine, because it is not as strong.

"Just as landed property is at the King's disposal, so are dignities. To-day one is raised to high honour; the next morning he is thrown down. When anyone commits a fault or an offence (*alguna falta ó alguna culpa*) in the King's service, the King orders there and then, in his presence, to give him fifty or one hundred lashes from a whip, and every blow that is given is heard from very far; when he has been well whipped, he goes home, gets cured in a hurry, and quickly runs back to his duty as before, without having lost more than the boy who gets a whipping in school.

"If this people were Christian, what a blessing it would be! What to do, my Father? What means will you give me to convert them? They listen to us: *non credunt auditui nostro* [2] (they do not believe our hearing). The King loves us much; he honours us; but he does not do what we want, which is his conversion.

"Lest Your Reverence should say that I do nothing for you,

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[1] *Tiene muchas minas de hierro, y cobre, y aun de plata, mas estan lexos; las de cobre si: que cerca de esta Ciudad estàn vnas de cobre.*

[2] Cp. John, XII. 38.

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I send you a copy of the points which I wrote for the Annual [Letter] from India. It is in Portuguese, that being our language here; and I want that other friends here see it first: for *Father Francisco de Vergara*, an old friend, must get it read and must show it to many in the city of Bazain,[1] where we have a College, of which he is Rector, although they say he is very old. *Vale igitur* (farewell, therefore). I make one condition: that is, that you will send it to our College of Alcala, that they may read it and commend to God this their brother, that they may see for what countries they are being educated, and may amass a large store of letters and piety, so that the Lord Jesus may be glorified through them *ubique* (everywhere). Amen.

"Commending myself earnestly to the Holy Sacrifices of them all and of Your Reverence."

"From this city and Court of Agra, the 14th of September of [1]609.

"*Geronymo Xavier.*"

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§ 4. *Reasons for his going to Chaul and interesting geographical details.*

While at Chaul, during the last years of his life, he told him[2] the reason of his coming there, and other details, to the following effect:—

"I received Your Reverence's letter of the 27th of February of this year on the 27th of November of the same,[3] and the many bits of good news you give me in it afforded me much consolation. I do not know how my letters did not reach you; for I write to you every year, though it costs me trouble, as I have no one to help me in these lands of the Mogol to make copies (*a escribir vias*), and I have not the strength I had formerly; but my love draws strength out of my weakness; and so I cannot help being pained that those letters which cost me so much trouble did not reach you.

"Two years ago, the Portuguese took a ship from a captain of the Mogol King which was coming from Meca, and he resented it so much, at the instigation of the said captain, that he showed himself very angry with them. And to force them to give him some satisfaction about the ship, he had us deprived of the churches of Lahor and Agra; and he sent me into exile as it were, telling us to go and complain to the Viceroy of what he was doing against us. And he took from us the alms which

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[1] We saw above (p. 113, n. 9) that he was at Bassein in 1593.

[2] To Fr. Thomas de Ituren.

[3] Four ships left Lisbon on April 5, 1615; one reached Goa on Sept. 21, 1615; another on Oct. 7; another on Nov. 11.

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he used to give for our upkeep. His sending me here was only a trick to make me arrange with the Viceroy about peace, and to conceal the fact that he was asking for it. That is how [P. 213] I was dismissed by him.

"When I arrived at the port of Zurrate,[1] the war had already begun, and, as the Mogol did not get the better of it (he got some hard knocks, rather), they took me prisoner with another Father. But, when they heard that the Viceroy was himself coming to attack them and the English, who lay at anchor in the port of Zurrate, they sent me to discuss with him *ea quae pacis sunt* [2] (the conditions of peace). And it pleased our Lord that peace, honourable to the Portuguese, should be concluded, and, though the King would not at first ratify what had been arranged by his captain, but asked for new conditions which the Portuguese would not agree to, he finally yielded to what had been agreed upon and the terms are now being fulfilled.

"Now that the Superiors have me here, they do not let me go back to them. And to be surer of me, they fettered me with the College of S. Paolo,[3] the rectorship of which is vacant, as the former Rector comes as Provincial. And I am now on my way thither, although I should require rather being for a good time in the Novitiate, having been twenty years among Moors. God knows what will happen. The work of substitute is at present carried on by *Fr. Francisco Vergara*, whom Your Reverence must know, who is as old as myself.

"Your Reverence asks me to write to you quite an amount of things, just as if I were a young man with nothing to do and enjoying a holiday. But you cannot expect so much writing from an old man, with little health and plenty of work, who is about to travel, and who must have written already a quire of paper in letters and copies (*vias*). However, I take Your Reverence's letter with me to answer the points in it, according as I may find some leisure, although I think I shall not find as much as I desired.

"The *Don Miguel* of whom Your Reverence speaks is the one who apostatised *from Religion and the Faith.*[4] May God have mercy on him!

"There is actually a great persecution in Japan: but *revera* (indeed) that was missing, so that the genuineness of the

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[1] Surat. [2] Luke, XIV. 32. [3] Goa.

[4] Fr. Jerome Xavier had a nephew, Don Miguel, the son of his eldest brother, D. Leon de Ezpeleta. In a letter to this brother (Goa, 12 Nov., 1593) he complains that he has no news of him. (Cf. J. M. Cros, S.J., *St. François de Xavier,....son pays, sa famille, sa vie*, Toulouse, 1894, p. 463. Fr. Jerome wrote to him from Agra, Aug. 14, 1602 (*ibid.*, p. 465). I see no reason for thinking there is question of this Don Miguel. Fr. Thomas de Iturен may have inquired about some Don Miguel in the East.

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Christianity of that nation may be seen. Your Reverence will see it.

"Last year, the English came in four ships; the Portuguese could not expel them from here; they got away safely, although in flight; at the Court of the King[1] they left their Ambassador, who is much favoured by him.

"The Kings whom I have known are the actual one and his father: he[2] died neither as a Moor nor as a Christian, but in the Gentile sect which he had embraced. The nephews of the present one apostatised at the order of their uncle, who was irritated at the capture of the said ship.

"As for the books which Your Reverence says you sent, I thank you very much for your trouble: but I did not ask you the Alcoran in Arabic, since we have no end of them here; I had it translated from Arabic into Persian, and from Persian into Portuguese.

"I shall manage to send to Your Reverence from Goa the information which you ask me about the lands of Prester John: for I cannot do it from here. And if (what is more likely) I should not send it from Goa this year, but am alive next year, I shall send it to Your Reverence *Deo volente*.

"The winter at Goa is in the middle of June, in July and August. Also in the lands of the Mogor, at Lahore, Agra, etc.; but not much. In December and January the cold is very great (*ay muy bonos frios*), but there is no winter-season as in Spain.

"The cities are generally built of mud, and they have not very good streets. The greater number of the houses are covered with leaves or straw. At Lahor there are good orchards, but few Europe fruits: these come, however, in great quantities from Persia. They have good houses, and in Cambaya, Ahmadabad, they are covered much better and whitewashed with lime; the streets are well aligned; this is generally the case in the kingdom of [P. 214] Guzarate. But, from the time that they fell into the power of the King of Mogol, they have been deteriorating much, just as the lands are much spoiled which at an earlier period were taken by the Mogores; for they destroy everything with their oppressions. Bengala is a very large kingdom, which belongs to this King *Jahanguir*. It is peaceful and very rich.

"The dress of these people consists of white cotton cloth. The rich dress richly on their feasts; they wear brocade, etc. All eat on the ground, and they eat well; their food consists of goat and rice. The rich eat sheep of five *cuartos*[3]; cows are not killed, the King having forbidden it for the sake of the Gentiles. And these get him to forbid every kind of flesh-meat and fish at a certain time of the year; the Moors eat it all

[1] Sir Thomas Roe. [2] Akbar.
[3] A copper coin worth 5 maravedis.

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the same on the sly; but it is *nullo modo* (not at all) sold in the market at that time. The King celebrates a great feast on the *Nou rum*[1] day; that is, the first or new day, which is the 21st of March, when they begin their year: it lasts forty days and all that time no flesh-meat nor fish is killed (*se mata*). And, as this time generally coincides with the end of our Lent, we are made to abstain from flesh-meat and fish many days after our Lent. The whole year round it is forbidden under heavy penalties to slaughter meat (*matar carne*) on Sundays and Thursdays.

"Enough, my pen, enough! See how much you have to write, and there is little time, etc.

"As regards what you say of Lahor, I answer that the maps make a mistake about its position. It is in 32 degrees of latitude and 108 of longitude.[2] Agra is in 26 and a half of latitude and 114 of longitude.[3] I do not know whether I shall be able to copy a paper with the longitude and latitude of the cities of these parts.[4] If I can, it will be sent with this letter; otherwise, patience. *Interim* (meanwhile), take these latitudes which I send you, and which are more than what I thought I would write. They go by one *via*, in the first *via* (*en la primera*).

"The deaths of *Fathers Ordonez, Ortega*, and others of our time, I felt *ut homo* (as man): they rejoiced me *ut fratrem* (as their brother), and that of *Fr. Rubio*[5] (*y la de el P. Rubio*), about whom a Father Rector of the College of Manila, who came to Goa this year, said that they are now reading at Alcala the course which he composed; *gratulor illi et nostrae Provinciae, si ita est* (I congratulate him and our Province, if that is so). Write to me about these things: who wrote, who printed, and what? Indeed, I am consoled to see the many new authors whom I find and see all along, and I am told that I shall find many at Goa. *Laudetur Dominus* (the Lord be praised).

"Commending myself to Your Reverence's Holy Sacrifices and prayers.

"From Chaul, the 4th of December, [1615].

"*Geronymo Xavier.*"

* * *

[1] Read: *nauroz.*

[2] Cp. with Monserrate (*Mem. Asiat. Soc. Bengal*, III. 538), 113° 59′ Long. E., 31° 39′ Lat. N., and the *Imperial Gazetteer of India*: 74° 20′ E., 31° 35′ N.

[3] Cp. with Monserrate, (*ibid.*, 537): 117° Long. E., 27° 19′ Lat. N., and the *Imperial Gazetteer of India*: 78° 3′ E., 27° 10′ N.

[4] We can judge that Fr. Jerome Xavier had no copy of Monserrate's MS. *Mongolicae Legat. Commentarius.*

[5] Anthony Rubius or Ruvio, S.J., a Spaniard; b. 1548; entered at Alcala, aged 21 years; taught philosophy and 11 years theology at Mexico; after 25 years in Mexico, returned to Spain, and died at Alcala on March 8, 1615. Cf. de Backer.

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§ 5. *He returns to Goa and passes to a better life, being Archbishop Elect of Angamale.*

The last letter which this apostolic man wrote to *Fr. Thomas de Ituren*, was from Goa, a few months before his death. He says :—

"I shall be short in this letter, as I have no time to write at length, and as I had no letter from Your Reverence to which to reply : for of all the ships which left Portugal, the first fought against four English ships and was so damaged that her own Captain, who got ashore with all the people on board, set fire to her, lest she might prove of use to the enemies : the second arrived, but without letters or Fathers, as these came on board the third, of which we have no news.[1] [P. 215] Blessed be God in everything !

"Thanks to God, I am in middling health and still in charge of this College, although it requires more strength than I have.

"The Mogol King ordered to reopen the Churches and he acts with the Fathers as before. Three days ago, I received a letter from a great captain of his, in which he asks me in the King's name to return thither, etc. I think the Fathers will not give me leave for that, because they fear I have not the health and strength required for the labours of that country ; and yet, now that I am at death's door, it mattered much for me to be in Moorish country ; perhaps, the happy lot of being killed by them might await me ; at any rate, it would be no small advantage to me to die trying to undeceive them from their false law and way. My Father, the King in the meantime kept our Churches closed up with stone and mortar ; but he ordered finally to open them, and it was done to our great honour and consolation, and he now treats the Fathers as heretofore. Herewith I send you a letter from the Fathers who remained there, which has reached me.

"My health is middling ; and, although not sufficient for the post of Superior, it would be enough for a subject's ; and medicines were no longer of any use to me when I got old. What I wished most was that they should give me time *ut attenderem mihi ipsi* (to attend to myself) in some place of retirement. However, in the work they give me I feel consoled with the hope that, through the prayers and merits of these my brethren, whom He entrusted to me, Jesus Christ our Lord will take pity on me. May His grace lighten the burden.

"*Fr. Francisco de Vergara*, who ceased being Rector of

[1] A reference to three ships which left Lisbon on March 25, 1616 ? The *S. Julian* was attacked by 4 English ships ; the second arrived, the third reached on Oct. 21, 1616. (Manoel Xavier, S.J., *op. cit.*, p. 47.) M. Xavier's information clashes with J. Xavier's statement, unless the second ship, the date of whose arrival is not given by M. Xavier, reached after January 5, 1617.

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this College, is now taking rest in the Novitiate, without office of any sort: he devotes himself to the concerns of his soul and has no obligatory work to distract him; he was granted this grace as a great favour, and may the Lord fill him with it, as He does.

"Of the others known to Your Reverence, none is now alive in this Province, since *Fr. Francisco Hernandez* died in a Mission,[1] and *Fr. Francisco Nunez* died in the City of Santo Thome.[2]

"From *Fr. Francisco Calderon* I received a letter this year, which came to me from Manila, whither he was banished from Japan with many other Fathers in the great persecution which was raised there against the Christians: in it some were martyred, and many were severely tortured, who showed great courage under it.[3] We do not know in what condition things now are. But what is sure is that that Christianity has always great need of being much commended to the Lord and of being much favoured by His Divine Majesty.

"The Christianity of China gets on very well. May God prosper it.

"And may He keep Your Reverence and hear the prayers which you make to Him for me, and those which this sinner makes for Your Reverence, to whose Holy Sacrifices and prayers I greatly commend myself.

"From Goa, the 5th of January of [1]617.

"*Geronymo Xavier.*

"I should much like to hear about the state of your (*essa*) Province and of our College of Alcala, concerning [its progress] in letters and piety, and about the material side, etc. *Omnes notos meos meo nomine saluta* (Salute in my name all my acquaintances)."

* * *

These are the letters of this indefatigable Missionary, the originals of which have been preserved. The same year [1]617 he went to Heaven to receive the reward of everlasting bliss. His death took place in the said city of Goa, on the 17th of June,[4] the time when, the fame of his great labours and

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[1] Apparently, Bengal. Cp. p. 113, n. 7.

[2] Not mentioned by Fr. L. Besse, S.J., in his *App. ad catal. Miss. Madurensis pro anno 1914*, where we have a list of Jesuits at S. Thomé and Negapatam. Only one "P. Franciscus Nunes," a Portuguese, came to India in 1611 (*Franco*).

[3] "After the death of Hideyoshi in 1598 peace reigned for fifteen years.... In 1609 and 1613 Dutch and English Protestants arrived who were jealous of the Spanish and Portuguese Catholics. In 1613 persecution recommenced..... In the following year.... it was decreed that Catholicism be abolished, and this edict was renewed by Hidetada in 1616..... The result was horrible." F. Ligneul in *Cath. Encycl.*, New York, VIII. 307.

[4] J. M. Cros, S.J., *St. François de Xavier,.... son pays, sa famille,*

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sufferings for the Christian Religion having reached Europe, he had, at the request of King Don Philip III, been elected [P. 216] Archbishop of Angamale, after the death of Father Doctor Francisco Roz.[1] But, although he was considered, owing to his great prudence, virtue, and worth, as very deserving of that mitre, for the good of numberless souls, the Lord was satisfied with the many whom he had won for him in the Mogor, and he desired to reward his heroic toil with a heavenly, not an earthly, dignity.

This servant of God wrote in the Persian tongue and against the sects of the Infidels, chiefly the Mahometan, a book on the mysteries of the Christian faith, entitled *Fountain of Life.*

A *Compendium* or Summary of the same work.

A tome about the Life, Miracles and Doctrine of *our Saviour Jesus Christ.* "This book, says the Licentiate Don Antonio de Leon in his *Bibliotheca Oriental*, he presented to the Great Mogor, who entitled it *Mirror of Purity*, and sent a copy to the King of Persia, whose satraps wrote another against it, throwing out some doubts which they desired to be answered. Accordingly, the Discalced Carmelite Fathers brought it to Rome (in the year 1629) and presented it to the Congregation de Propaganda Fide, where the matter is being considered." Thus far this author.

Fr. Geronymo Xavier wrote also in the same Persian tongue the lives of the *Apostles*; the histories and achievements of the *Holy Martyrs*; a *Directory of Kings*, for the good government of the kingdom; different letters in Latin, from India and the Mogor.[2]

A heretic[3] translated into Latin the History of Christ and the History of St. Peter, but he misunderstood the Persian text in some places and so translated it badly; and he added besides some notes which are clearly heretical and deserve to be burnt. See on this point the *Bibliotheca* of Fr. Philip Alegambe, and read in detail the achievements of this famous man in the many

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sa vie, Toulouse, 1894, p. 467, gives June 7, 1617, for the date of his death; Sommervogel has June 17, 1617; Fr. F. de Souza, S.J., who wrote at Goa, has June 26, 1617 (*Or. Conq.*, Lisbon, 1710, II. Conq. 1, D. II., Nos. 48-49, pp. 153-155). Fr. J. Xavier died burnt and asphyxiated in a fire at the new College of St. Paul or of St. Roch. Other fires occurred at that College on Jan. 1, 1591; in Dec. 1663; on Jan. 6, 1675; and in 1698, the year when Fr. de Souza wrote.

[1] Bishop Francis Roz died only on Febr. 18, 1624, at Parur, where a Malayalam inscription still records the date of his death. Cf. Paulinus a S. Barth., *India Or. Christ.*, Romae, 1794, p. 64, who copied the date at Parur on Sept. 10, 1785. Jerome Xavier had been appointed his coadjutor.

[2] Our bibliographical repertories are still very unsatisfactory as regards J. Xavier's Persian works.

[3] Louis de Dieu.

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authors who have written his life, especially in the 4th tome of our *Varones Illustres*, published by the (Venerable) Fr. John Eusebius.[1]

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[1] Nieremberg.—Being away from libraries when I commented on these extracts, I had to leave many things without sufficient comment: *e.g.*, the names of several of Fr. J. Xavier's friends in Europe.

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Some Letters of Fr. Jerome Xavier, S.J., to his Family (1593—1612).

Compiled by the REV. H. HOSTEN, S.J.

The "magnificent lord Miguel de Xavier, lord of Xavier and Azpilcueta," had for son "an admirable imitator of the zeal of Francis Xavier in the Indies, Geronymo de Ezpeleta, who will never sign otherwise than *Geronymo Xavier*, happier and prouder to connect himself with Anna de Jassu and her brother than with all the noble lineage of the Ezpeleta."[1]

The following pages are taken from P. L.-Jos.-Marie Cros, S.J., Saint François de Xavier,....Son pays, sa famille, sa vie. Toulouse, A. Loubens, 1894, pp. 461–467.

[P. 461] "On January 1, 1621, Father Ximenez de Occo wrote:—[2]

'The holy Fr. Geronymo Xavier, whose true name is don Geronymo de Ezpeleta, adopted the name of Xavier out of devotion for his holy uncle. He was born in 1549, in the house of his family, at Veyre, at a league from the town of Olite. The Ezpeleta are of very noble lineage, both in Navarre and in France. I have visited the castle of Veyre and have slept in Fr. Geronymo's room.

'The eldest brother of Geronymo, don Leon de Ezpeleta, had another brother, with whom I was intimate in my childhood, namely, don Bernardo de Ezpeleta, prior of the Knights of Malta, in the kingdom of Navarre, and for a long time general of the galleys of Malta. He was a man of great intellectual range, of singular wisdom and prudence, and who practised the virtues after the manner of the Saints. All the Knights of the Order said of him: He was a real Saint, and had he lived, we should have had him for Grand Master.

[P. 462] 'Geronymo entered the company at Alcala, on the 9th of May, 1568, and from there left for the Indies. He was superior at Goa, and remained long with the Emperor of the Mogols. The members of his family say: "The letters which Fr. Geronymo wrote to us would prove, not only his sanctity, but his prophetic spirit." He wrote to me from Agra, the Court of the Great Mogol, on the 20th of October, 1609: "I am old already; I am sixty years old, and am yet

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[1] Cf. P.-L. Jos.-Marie Cros, S.J., *Saint François de Xavier, Sa vie et ses lettres*, Paris, Retaux, 1900, Vol. I, p. 134.

[2] Domestic archives.

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weaker than such an age would allow to suppose; I need therefore the prayers of all, and I expect, in particular, those of Y[our] R[everence], since kinship of blood and spirit give me a double right to them. I recommend myself much also to the novice Bernard."

'This novice, of whom Fr. Geronymo speaks, was his grand-nephew, son of the Ezpeletas established at Olite. When I went to Navarre, for the feasts of Fr. Xavier's beatification,[1] I saw at Olite a saintly widow, aged eighty years or more, the novice's grandmother. There is still at Olite doña Isabel de Ezpeleta, Fr. Bernard's sister, and niece of Fr. Geronymo, a lady much respected and of the first of the town.'

"At another place in his notes, Fr. de Occo says:—

'I received a letter from the saintly Fr. Geronymo Xavier, my uncle (*mi tio*), my mother's cousin (*primo*). By the divine mercy, a sister of our glorious Father Saint Francis Xavier was my mother's great-grandmother.'

"There is question here evidently of Ana de Jassu. Juan Ximenez de Occo's mother was an Ezpeleta, and Fr. Geronymo was Fr. de Occo's uncle *à la mode de Bretagne*.

"Fr. de Occo spoke of letters by Fr. Geronymo to his family. Here are some extracts:[2]

"**1593.**—To his brother, *don Leon de Ezpeleta*, lord of Veyre, grandson of Ana de Jassu.

'Señor and brother of my soul,—Since my last letter, I no longer fancy Your *Merced* otherwise than old, broken down, suffering; the love I have for you and owe you obliges me all the more [P. 463] strictly to remind you that you must take care of putting order in your soul, and of keeping it in good condition, under the very penetrating and very pure eyes of our just judge.

'Do not fail, *Señor mio*, to make a good confession every month; while in good health, make your will, as you like; leave no embarrassments to your successors; what they would have to settle with the *vezinos* (neighbours), it is better that you settle yourself; especially, leave no debts; leave nothing undone to pay them, while you are alive; who does otherwise places his soul in great danger of damnation after death; no alms or prayers, you know it well, can preserve from hell those who, having been able to pay their debts, have not done it. Consider also that to several, at the hour of the final account, it will be of no avail to say that they could not pay. Regulate your affairs so well from now that the Father of the poor, judge of us all, may see that you did everything possible to pay. I insist on this point, knowing that God, at the

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1 St. Francis Xavier was beatified in 1610.—*H. H.*

2 Archives of the Marquis del Amparo. Cf. on them *op. cit.*, Vol. I, p. IX.

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hour of his accounts, is more rigorous in this respect than we think, and I hold for certain that many of those who are praised on earth for their alms and legacies are in hell, because, while able, they neglected to pay their debts.

'To don Miguel, my nephew, say, I pray, that he treats me very ill, by not letting me know what becomes of him; it is time, it seems to me, to establish him (*de lui donner état*). I recommend strongly his young sisters to him; let him know that his father, Your *Merced*, being our brother, took for us a father's place, for which we shall be thankful to him as long as we live. *Mi Señora* doña Maria (de Atondo), as you assure me, considers me still as her son, as when I was at Veyre, and I, I take great care to recommend her to Our Lord with all her sons.

'Give news from me, I beg of you, to all our Señores *parientes* of Pampeluna and to Señor the Viscount de Zolina; tell him to be greatly mindful that he belongs to the trunk, to the holy stem of Fr. Master Francis.

'To the Señora widow de Tafalla, our aunt (Lucia de Aguirre,, widow of *Capitan* Juan de Azpilcueta) and to her son don Francisco, say the same. Speak to me at length about all. May Our Lord Jesus keep Your *Merced* in His holy hand; however great a sinner that I am, I beseech him to do so and I shall not cease asking it of Him.

[P. 464] 'Recommend me much to the souvenir of all our *vezinos* of our *lugar* of Veyre; tell them that I take care to recommend them all to Our Lord; I do not designate any of them by name, because I love them all specially and commend them all to God. Be careful to remain on peaceful terms with them, even should it be at your own expense, and, by example as in word, teach your sons, don Miguel in particular, to do the same.

'May Our Lord keep Your *Merced* and all your house.

'From Goa, the day of San Milian,[1] our Patron, to whom I remain always devout, having received in his church the grace of being a Christian.'

"**1594, 18th October,[2] from Goa.**—*Al Señor Don Bernardo de Ezpeleta Commendador de Malta, e mi Señor y hermano en Christo.* (*De la India Oriental, 1ª via.*)[3]

'I. H. S.—*Senhor,—El amor y gracia de Jhu X° N° Señor sea con V.M.—Amen.*[4]

'I had decided to write to you at great length, but a

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[1] St. Emilian (Millán), a Spanish monk; alive in A.D. 554; famous in old Castile, where several towns and parish-churches bear his name. His feast falls on Nov. 12.—*H. H.*

[2] *Sic* in Cros; and 28th Oct., at the end.

[3] To the Señor....., Commander of Malta, and my Señor and brother in Christ. (From East India, 1st copy.)

[4] "The love and grace of Jesus Christ Our Lord be with Your Merced. Amen."

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reason which I shall tell you prevents me and obliges me to write in haste. I have had no letter from you this year, and believe me; a letter less from you is a privation which I feel. The letters must have perished in these shipwrecks so numerous. (*Follow details on the work of the Missionaries, the exploits of the Viceroy and the Portuguese in their wars against the Muhammedans, etc.*)[1]

'For two years I was in charge of this house of Goa; now it pleases God Our Lord to send me to the lands of the Mogol; the king himself, called Equebar, has requested the Viceroy and the Bishop to send him some Fathers. He is a very powerful king; four hundred leagues separate us from his Court, and the four hundred leagues are across his dominions. Would to God that I have the happiness of announcing His Holy Law as becomes. The chief of the Court and of the country are Moors. If I am of little use to them, my sins will be the cause of it; as for me, I shall consider blessed fruit of my labours to suffer and die for the most holy name of Jesus Christ. I go, and I offer myself for it, with great consolation of my soul; never, in the Indies, have I felt so happy, so full of courage and confidence, as at this hour, when God applies me to a work which will have to cost me so much, and the more the better.

[P. 465] 'Señor and my brother, the present will be, I believe, the last one that I shall write to you. Hasten, Señor, to save yourself, that we may meet in the kingdom of heaven, there to enjoy our God eternally With His grace I shall do the same; help me with your prayers as it is my duty to help you. Should you write to me, your letters will be sent to me where I am, as long as they can find me there alive. Consider, Señor, that in the religion in which you have entered, the facilities of salvation are not wanting; keep in it your first fervour. If there are near you Fathers of the Company of Jesus, profit by it. What I recommend to you is the frequentation of the sacraments, prayer, and holy readings.

'I do not think I can write to our brother; give them news about me. There now, I am saying good-bye to them all; but I shall not cease for that to recommend them always to our Creator. You know, you, what obligations we have towards them; neither you nor I should be where we are, had the Señor don Leon not surrounded us, as he did, with a father's care, love, and providence; yes, indeed, he showed himself to us a father more than [P. 466] a brother. May it please the very sweet Jesus to reunite us all there in His holy kingdom. *Amen, amen.*

'From Goa, the 28th of October,[2] 1594.

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[1] Passages omitted by Fr. Cros.

[2] *Sic* in Cros; and 18th Oct., above.

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'Your *Merced's* unworthy servant and brother in Jesus Christ.—Jeronymo XAVIER.[1]

"**1602, 14th August, from Agra.**—To his nephew, Don Miguel de Ezpeleta. (D. Leon had died on the 24th of June, 1595.)

"After long details on those countries, on the work of the Jesuits in Ceylon, etc., Fr. Geronymo adds:—

'There, our Fathers have already many Christians; but not as many as in the kingdoms of Japan, whence recent letters have reached me. They tell me that, last year, more than sixty thousand became Christians. One counts there already more than three hundred thousand faithful, brought into the Church during the fifty years that have elapsed from the time that our blessed uncle, Fr. Master Francis Xavier, arrived in that country with his companions, to begin there the work of conversion; such is already the fruit of his great labours.'

"**1612, 15th October, from Goa.**—To Fr. Juan Ximenez de Occo:—

'IHS. *Pax Christi.*—Let the form of this note not astonish too much Your Reverence; I have not even been able, this year, to write to you in any way. Serious maladies, added to old age, have more than once persuaded me that I was going to say farewell to this world; I feel better now, thanks to God, but, as I have just finished writing letters for Rome and elsewhere, I am so prostrated that I have difficulty (you may believe me) to write these few words. I congratulate you on your promotion to the priesthood, because you will use this gift (I trust), as the Company wants, and I congratulate myself too, since I shall have a share in a good part of your holy sacrifices, and I need it so much, at the age and in the condition where I am. Forgive me; I can no more. I recommend myself much to your prayers and holy Sacrifices.—Jeronymo XAVIER.'

[P. 467] "Fr. Geronymo died in the odour of sanctity, at Goa, on the 7th of June, 1617.[2] To him, as to Francis, high employments were proposed in Europe; the King of Spain nominated him to an archbishopric.[3] God gave him the grace which he coveted, to die a simple missionary.

"Fr. Geronymo did not forget, in the Indies, the son of

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[1] "Bernard united himself, as much as he could, to the Society of Jesus; he solicited and obtained (27th August, 1614) letters of application to the spiritual family of St. Francis Xavier."

[The last page of the original of this letter, an autograph, is reproduced in facsimile at p. 465.]

[2] See the date, 26th June, 1617, in our last paragraph.—*H. H.*

[3] As coadjutor to Archbishop Francis Roz of Angamale-Cranganore. —*H. H.*

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capitan Juan, Francis Xavier's more beloved brother; he wished that he and his mother, Lucia de Aguerre, should not lose sight of the examples of the Saint, with whom a bond of such close kinship united him. Lucia and her son remained, they too, worthy of the honour God had bestowed on them..."

Father Jerome Xavier's death.—

Father Jerome Xavier died a tragic death at Goa. He was the victim of one of the many fires which broke out in the Casas do Rosario, which were in turn a dwelling for seculars (till 1578), a convalescent home for Religious (1580), a Professed House (1585), a Novitiate and a College, the New College of St. Paul or of St. Roch. "The first fire carried away the Church of the Novitiate on the first of January of the year fifteen hundred and ninety-one [Jan. 1, 1591]. In the year 1617, on the twenty-sixth of June, died Father Jeronymo Xavier, a Navarrese, the Rector of the new College, burnt and suffocated with the smoke of the fire which caught hold of his bed."[1]

St. Joseph's College, Darjeeling.
August 9, 1926.

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[1] Cf. Francisco de Sousa, S.J., *Oriente Conquistado*, Lisbon, 1710, Vol. II., Conq. 1, D. II, Nos. 48, 49, pp. 153–155.—The other fires were of Dec. 1663, Jan. 6, 1675, and of 1698, the year when Fr. de Sousa was writing.

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Some Notes on Bro. Bento de Goes, S.J.

(*1583—d. 1607.*)

By the REV. H. HOSTEN, S.J.

Father Nicholas Trigault wrote on Bro. Bento de Goes (24th Dec., 1607):—

[P. 225] "I have said enough about the Christians [of Goa]. Let us say something now of the Missions of this Province [of Goa], and let us begin with that of the kingdom of Mogor or of Achebar (for it is the same) and the greatest of all the Mahometan [kingdoms]. There are in it four of our Fathers, very distinguished men. The Superior of the Mission is Father 'Hierosme' Xavier, a personage very worthy of the name and kingship of so great an Apostle. The fruit they reap in those places is very small, which is nothing new among Mahometans. However, it is no small thing to have churches in the midst of the chief and sworn enemies of Christianity, for they have two of them in the two chief towns and usual residences of the King of Agra and Lahot [=Lahore], and to practise under their beard the functions and ministrations of the Catholic religion. And the king is very humane and kind towards them. Not long ago, the old king died; his son, who succeeded him, showed himself in the beginning very friendly to Mahometans and hostile to the Christians; but, it was seen afterwards that what he did was only to establish himself more securely. His son having rebelled against him, he [the king] took him [P. 226] alive, and keeps him now shut up in a narrow prison. Now, before I finish with the affairs of the Mogor to pass on to those of Ethiopia (*Æthiopia*), let us speak of one of our brothers, called 'Benoist Gaez' [Benedict Goes], who was sent very far into the interior of the *terra firma* of that great country. Our Fathers, who are at the king's court, had often heard from the merchants that, far from there towards the north, there were Christians in a certain kingdom, which they called of Catay. It is not known whether this kingdom is in Tartary or in China. In fact [? *S. P. de vérité*] Father 'Matthew Ricci' writes to us from China that he has heard something similar about certain Christians who are to the north. Now, quite seven years ago, one of our Coadjutor Brothers, who is not at all versed in *belles-lettres*, a man of great prudence and virtue,[1] and speaking

[1] *Un de nos frères coadjuteurs versé aucunement ès bonnes lettres, de grande prudence...*

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extremely well the Persian tongue, which is used in those countries, was sent to discover what might be the truth of it. Our Fathers who are in the Mogor receive rather often news from him. The last received, the latest in date, contains in substance this, that he was still a distance of fifty-two good days from Catay, and that he was starting on the first day [occasion ?] to go there in the company of some merchants, whom they call Castillas [1] in those countries, and who are allowed to enter it at a certain season of the year and up to a certain number, seventy-two,[2] I believe; that there are still, on so long a journey, an infinity of dangers, always going through the lands of the Mahometans. To pass more easily, he says he is a Christian of Armenia; and [P. 227] for the purpose he has changed his name. He says he has reliable information that in that great Empire of Catay there are great vestiges of Christianity; for they have mitred Bishops, confer baptism, keep Lent, and the priests observe celibacy, and other such proofs of our Christianity. He learned all these things from a physician, who was a captive in the hands of the Turks, and said that he would write to us soon more certain and reliable news about it. The infinite goodness of our God will doubtless allow that those beautiful and great countries be opened to our Company, which, as much as she can, embraces the whole world in her zeal, and endeavours with all her strength to procure the salvation of all men. The thing well deserves that you should obtain it from the Divine Majesty by your prayers and holy sacrifices." [3]

Father Francisco de Sousa has the following on Bro. Bento de Goes' conversion :—

[P. 258] "A stupendous miracle happened in the year one thousand five hundred and eighty-three [1583] in a village (*povoação*) of the Travancor Coast, a league and a half from Coleche. The fleet of Cape Comorin landed there and with it a soldier, a native of Villafranca, in the Island of S. Miguel, who, seeing himself sunk in many sins, which a loose life entails, was going along almost despairing of his salvation. One day, he entered a Church, and, kneeling before an image of the Queen of Angels, an oil-painting, he asked her with many tears, help and succour. And lo! suddenly four fountains started flowing: two of tears in the eyes of the Infant Jesus, who was in the arms of Our Lady, and two others of a certain liquid, like milk,

[1] A confusion. The word should be *cafilas* : caravans. Trigault must have written *caffilas*.

[2] There is something sacred about the number 72 in China.

[3] From a letter of Father Nicolas Trigault, S.J., to the Rev. Fr. François de Fleuront, his former professor of Philosophy at the College of Anchin. It is dated Goa, the eve of Christmas, 1607. He had arrived at Goa on Sept. 12, 1607. Cf. Abbé C. Dehaisnes, *Vie du Père Nicolas Trigault*, Tournai, 1864, pp. 225–227.

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which flowed from the hands of Our Lady and bathed the altar. If all the faithful are members of Christ, as says St. Paul (*I. ad Corint. 6.*), repentant sinners are the pupils of His eyes, and therefore Christ and the sinner weep together. This Lord loves so much our tears that He makes them His own and transfers them from our eyes to His, thereby to move the more the Eternal Father to pardon us our faults. Such is the sympathy between the heart of Christ and ours, that, when ours melts into tears of sorrow and contrition, His too gushes forth in fountains of pity and mercy. The sinner weeps [P. 259] bitterly, when Christ deigns to cast His eyes on him, as happened to St. Peter, and Christ weeps for joy, when He sees the sinner weep, for tears of repentance cause great jubilee in Heaven. The tears of Christ gave birth to the tears of the soldier, and the tears of the soldier wetted the eyes of Christ; and so many springs of water were necessary to wash away so many and such grievous sins. The liquid could not be attributed to the moisture of the weather, because it is only in summer (*verão*)[1] that the fleets are wont to go along that coast. The soldier, wondering at what happened, called out to his companions, all of whom witnessed the miracle, and they divided among themselves a handkerchief which they steeped in the liquid on the altar, which was distilling like myrrh from the hands of the Spouse. The soldier made a confession of his whole life to one of our Missionaries, and made a vow to enter Religion, which he did. The people of the fleet adorned the Church with boughs, and the ships celebrated the miraculous occurrence with salvos of artillery. Father Sebastião Gonçalvez says: 'I informed myself about this miracle in the year one thousand six hundred and nine [1609] from our brother Antonio Magro, who a day later saw the marks of the miraculous liquid, and made his novitiate at Goa together with the said soldier, with whom I was very well acquainted in the College of St. Paul.' He had, however, a scruple to tell his name, unless perhaps it was an oversight. In another part the same Author rejects this scruple, and says it was our Brother Bento de Goes, and that the Vicar of the Church was Father Nicolao Espinola."[2]

The same story is related as of recent occurrence in the *Annuae Litterae Societatis Jesu Anni M. D. LXXXIII*, Romae, M. D. LXXXV, pp. 211-212.

"In one of the villages of this Court [of Travancore], an event occurred which is worth recording in this letter. On

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[1] *Verão*: so they commonly call the summer; but properly the spring. (*Portug. Dict.*)

[2] Cf. Francisco de Sousa, S.J., *Oriente Conquistado*, Lisbon, 1710, Vol. II, Conq. II, D. II, No. 5, pp. 258-259.

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disembarking from a vessel (*ex myoparo*),[1] a soldier, who had lost all hope of salvation, as he had given himself up to the devil, entered the Church, and falling on his knees before an image of the Most Holy Mother of God, he implored her help with many tears, when lo! the Child Jesus in the arms of the Virgin was seen weeping with the soldier, while from the hands of the Mother there poured a fountain of water which flowed over the entire altar, that the soldier might understand thereby how great was his hope of pardon from her who is the fountain of grace, and how easy, at the prayers of His Mother, is the Son, who thus received with tears a prodigal returning to Him. Informed of the whole matter, his companions hasten to see, that the more numerous the eye-witnesses, the greater might be the proof of the wonder. And, indeed, they soaked a handkerchief in the water which (we said) had wetted the altar, and divided it among themselves. As for the soldier, he came to us, and after making a confession of his whole life, he made the vow to enter Religion, so that the more sinfully he had bound himself to the devil, the closer he might bind himself to God."[2]

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[1] The meaning of *myoparo,—ōnis* is given as a light vessel used by pirates. I understand that the fleet on which he was convoyed merchant-vessels for safety against the pirates of the Malabar coast.

[2] For fuller details on Bento de Goes see C. Wessels, S.J., *Early Jesuit travellers in Central Asia (1603–1721)*, The Hague, M. Nijhoff, 1924, pp. 1–41.

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Three Letters of Fr. Joseph de Castro, S.J., and the Last Year of Jahāngīr.

(*Aug. 24, 1626—Aug. 15, 1627.*)

Translated and edited by the Rev. H. Hosten, S.J.

Jahāngīr died on October 28, 1627, after a short illness, while encamped at Chingiz Hatlī, a village near Bhimbar, at the foot of the hills, on the road to Kashmīr, from which he was returning.[1]

The following three letters, translated and edited from rotographs of the autograph originals, were written from Jahāngīr's camp in the Kābul country and in Kashmīr in 1626 and 1627. They show that, like his father Akbar, Jahāngīr deluded the Jesuit Fathers and himself till the end with promises and hopes of conversion. Never had he been nearer to it than in 1609-10, when he allowed four of his nephews to be baptised. He was on the point of following suit. He might have been an Indian Constantine, but he merely said: "What will happen, if I too become a Christian?"

Fr. Antonio Ceschi di Santa Croce, S.J., wrote to his family in 1650: "The former King [Jahāngīr] showed much favour to the Christians of these parts; on the Fathers he bestowed large alms, and, when he was at the point of death, he ordered to call the Fathers, because he wanted to become a Christian; but his people would never call them."[2] Fr. Ceschi is not likely to have made a mistake in the matter of Jahāngīr's last wishes. Fr. de Castro, who was the one whom they would not call, had died in 1646, only two years before Ceschi's arrival in Mogor, and there were those among the Fathers of Mogor who could have told Ceschi what they had heard from de Castro.

Fr. de Castro does not refer much to the political events of 1626-27 in the letters before us; he says he has done so at length in other letters to Frs. Fabricio Banfo (1626), Nuno Mascarenhas (Kābul, 1626), and Claudio Francesco Septalio (Kābul, 1626). Unfortunately, these and many other letters of his have yet to be discovered.

Fr. Joseph de Castro was born at Turin, apparently of Portuguese parents, as his name would show, in 1577. He entered the Society of Jesus in 1596, and sailed for India from Lisbon, not yet a priest, on March 25, 1602, on which occasion he is called "a Portuguese" by Franco. The fleet of six ships

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[1] Cf. V. A. Smith, *Oxford History of India*, 1919, pp. 387, 391.

[2] Cf. my translation of *The Spiritual Letters of Father Antonio Ceschi di Santa Croce (1647–56)*, in *The Examiner*, Bombay, Sept. 1, 1917, p. 349.

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arrived at Goa on or about September 2, 1602. He came to Mogor in or before 1610, as the Catalogues of Mogor mention him in 1610-16, 1618, 1620, 1621, 1624, 1633 and 1641. In 1612 he made his profession of three vows We have determined his stay in Mogor for the period 1624–28 in *A letter of Father Francisco Godinho, S.J., from W. Tibet (Tsaparang, Aug. 16, 1626)*, published in *J.P.A.S.B.*, Vol. XXI, 1925, pp. 49–61.

He is the Joseph da Costa of Manucci. Cf. W. Irvine, *Storia do Mogor*, I. 161; IV. 424. Cf. also *J.P.A.S.B.*, 1910, pp. 458. 460. 529-532. 540. 542.

The letters we have of him show where he was at different times between 1631 and 1642 : Kingdom of Bengala, Nov. 24, (20 ?), 1631; Bengala, Aug. 28, 1632; Mogol, Aug. 8, 1632; Agra, Nov. 24, 1632; Agra, Febr. 6, 1633; Agra, Oct. 8, 1633 (in this letter he says he was cruelly beaten for the faith); Agra, Sept. 5, 1635; Agra, Dec. 17, 1636; he wrote as Superior of the Mission on April 16, 1637 and October 29, 1637. We have also letters of his dated Agra on Aug. 20, 1638, September 1, 1640, Oct. 3, 1640, Aug. 3, 1641, Aug. 25, 1641, Jan. 1, 1642.

He is said to have died at Lahore on Dec. 25, 1648; but 1648 is a mistake, since in the *Jesuit Annual Letter from Mogor (May 1648—Aug. 1649)*, published in the Allahabad University *Journal of Indian History*, Feb. 1922. pp. 226–248, it is stated that he was disinterred in the beginning of 1648, more than a year after his burial, and found incorrupt. In February 1648, Fr. Christopher da Costa conveyed his remains from Lahore to Agra, where they were honourably buried "in the Cemetery of our defunct Fathers." Moreover, the date 'Dec. 25' must be a mistake for 'Dec. 15.' In 1913, Fr. Hyacinth, O.C., Agra, found in the compound of the Agra Cathedral a stone (2′ 2″ × 1′ 7″) bearing an inscription which was printed in *The Franciscan Annals*, Agra, Cathedral Mission Press, 1913, p. 293 (cf. my *Mīrzā Zū-l Qarnīn* in *Mem. A.S.B.*, Vol. V, p. 185), but which I reconstruct as follows here :—

AQVI IAZ O P. JOSEP̃
DE CASTRO DA S.
COMPA TRESLADADO
DE LAHOR ONDE MOR
REO AOS. 15. D. DZẼB.
1646.

(Here lieth Fr. Joseph de Castro, of the sacred (?) Company, translated from Lahor, where he died on the 15th of December 1646.)

This stone, somehow, must have been rejected : for on his tomb in Martyr's or Martyrose's octagonal chapel, in the Padres Santos Cemetery, Agra, there is this inscription : AQVI IAZ/O P. JOSEPH/DE CASTRO/FALECEO/LAHOR AOS 15 DE/

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DEZẼBRO D' 1646. (Here lieth Fr. Joseph de Castro; he died at Lahor on the 15th of December 1646.)

In 1919, under the title *The Jesuit Post of Mogor of 1615 gone to England*, I published in *The Examiner*, Bombay (Aug. 9 16. 23), old English translations of five Jesuit letters, two of which are by Fr. J. de Castro. These five letters, dated between Febr. 25 and April 10, 1615, were entrusted to a young Englishman, Thomas, a Protestant, who after visiting Ajmer and Agra, was going to Europe *viâ* Aleppo. The letters, instead of reaching the addressees, went to England and remained there, and English translations were made of them. Some of the originals, and the translations of all five are now in the Cottonian Library, British Museum, whence I obtained copies. De Castro's letter to the General (Agra, April 10, 1615) is in Vespasian, F.XII, foll. 143r–143v;[1] the Italian autograph, in Titus B. VII, foll. 111r–111v (old pagination, 112r-112v); his letter to Bro. Joseph Baudo, S.J., of Milan (Agra, April 10, 1615) is in Titus B. VIII, foll. 249r–250r (old numbering, foll. 239r–240r);[2] the Italian autograph, in Titus B. VII, foll. 132r–133v.

On April 10, 1615, de Castro acknowledges a letter from Bro. Joseph Baudo, written on June 14, 1613, and received on February 1615; he salutes Father Thomas Ceronio and Father Claudio Francesco Septalio, from both of whom he had received letters, and asks Baudo to visit in his name the Church of Our Lady of Mondevi (Mondovi ?). He (de Castro) will say Mass for Fr. Bern° and Magn° " and our two defunct parents at Vigone and Scalengue (?)". He salutes *S^re[3] Gioani Giacomo di Castro, S^re Gioani Baudo*, Fathers Antonio Antoniolo, Antonio Morallo, Fabio (Tobia ?) Bastone, *Fabricio Banfo, Antonio Schelino*, Giovan Baptista Apiano, and Brothers Ambrosio Vertua and Stephano Santo; also, Brother Baudo's mother and his aunts Lucia and Octavia.

The names we have italicised recur in 1626-27, either as de Castro's correspondents or as those to whom he wishes to be commended. On Aug. 24, 1626, he mentions also Signore Piccolomini, to whom he sends greetings.

Fr. Claudio Francesco Septala or Settalo of Milan (whom de Castro calls Settali and Septalio) died on Sept. 5, 1628 (Sommervogel), perhaps before getting de Castro's letter dated Kashmīr, Aug. 15, 1627.

St. Joseph's College, Darjeeling,
Aug. 8, 1926.

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[1] Cf. *The Examiner*, Bombay, Aug. 23, 1919.
[2] Cf. *ibid.* The Italian texts of the letters remain to be published.
[3] I read " Pre ", when I published that letter. See *infra*, Letter I.

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LETTER 1.

Fr. Joseph de Castro to Fr. Joseph Baudo, S.J., Turin.

(Kābul, Aug. 24, 1626.)

SUMMARY: 1. *No letters from Baudo in 1626; news of him, dated 1624, from Fr. Cl. Fr. Septalio; de Castro's yearly letters to Baudo; Baudo's last letter from Turin; 2. de Castro and Jahāngīr in Kābul in 1626; Jesuit church and house at Lahore; hard journey to Kābul; 3. de Castro, chaplain to the Christians in J.'s army; religious discussions at Court; 4. J.'s kindness to the Fathers; he commends de Castro's fearlessness in the discussions; 5. the Mogor Mission; the Mission of Tsaparang (W. Tibet); batch of four gone to Tibet in 1626; church and house built at Tsaparang by the King of Guge; 6. other Missions in the East; Japan; the English and the Dutch in the Indian Seas; Khurram rebellious against his father J.; 7. long letter to Fr. Fabricio Banfo (1626); 8. friends to be saluted; 9. request for prayers.*

	†	†
[P. 1]	Jesus Maria.	[P. 1]
1626* $\frac{24}{\text{VIII}}$ †	Molto R^do in	Jesus Mary.
Pax X^i,	Chr'o P^e,	Very Reverend Father
	de Castro†.	in Christ.[1]

1. P^e mio in Chr'o in questo anno non ho riceputo letere di V. R. ne noua sua, saluo che il P. Claudio franco Settali mi ha scritto che V. R. staua in Torino, ma la letera he di 1624. di modo che non ho potuto sapere certe noue di V. R. di q^ti doi anni di 1625.

The peace of Christ.

1. My father in Christ, this year I have not received letters from Your Reverence, nor news about you, except that Father Claudio Francesco Settali[2] wrote to me that Your Reverence was at Turin, but the letter is of 1624,[3] so that

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* Endorsement; writing A.

† Ditto; writing B.

[1] On Fr. Joseph Baudo, not yet a priest in or about 1615; see introduction.

[2] Fr. Claudio Francesco Septalio (Settala): born at Milan, entered the Society in his youth; taught humanities; was considered a very learned man; died at the College of Arona, aged 50 years.

He wrote: (1) a treatise on colours (left incomplete): (2) the Acts of the Bl. Manfredo Septala, Priest and Hermit: (3) eulogies or short lives of: "Blasii Riberae, Petri Pontaurei, Joannis Fernandez, Gasparis Alvari, Gregorii Scribae, Alvari Mendez; omnes de anno 1570." Cf. de Backer, *Bibl. des écrivains de la C. de J.*, 6e série, Liége, 1861, p. 633, *s.v.* Septala.

[3] The ships of Portugal generally left in the beginning of the year, and, if all went well, they arrived in India after about six months, generally in the second half of the year. Letters written in 1624 could reach the Lisbon ships up to the 25th of March, when 8 ships left for India, arriving together at Goa on Sept. 2, 1624; letters of 1624, arriving at Lisbon after March 25, 1624, must have been forwarded by the two ships which set sail on April 6, 1625, and arrived at Goa in September 1625.

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1626. puo essere che venguino in q^te naui, *quomodocũq ;* sit io non lasciaro di escriuergli le mie como ho fatto ogni anno sin adesso.

I have not been able to learn any certain news about Your Reverence for these two years 1625 and 1626. It may be that it is coming in these ships.[1] *Quomodocumque sit* (be that as it may), I shall not fail to write to you news of myself, as I have done every year until now.[2]

L'ultima che ho riceputo di V. R. fu fatta in Torino essendo la procuratore di esso Collegio. non so perche causa habbi lasciato di escriuere, o se ha scritto saria [*sic*] tanto tardi che non ariuorono [*sic*] al tempo della partenza delle naui di Portugalo.

The last letter I received from Your Reverence was written from Turin, when you were there as Procurator of that College. I do not know for what reason you have omitted to write: or, if you have written, it must have been so late that your letter did not arrive at the time of the departure of the ships of Portugal.

2. Le mie noue sono continuare con questo Re andãdo ogni anno, discorendo p'li suoi regni, in q^to anno uenessimo in uno regno chiamato Cabul che sta nella Tartaria trecento e cinquãta miglia di Lahor doue teniamo chiesa publica e casa, citta reale molto mag^r di Milano, et del tutto abundantiss^a habiamo patito extraordinari disaggi, p' essere il camino pieno de monti altiss^mi & sterilissimi.

2. My news is that I continue with this King, going with him every year and running about through his kingdoms. This year we came to a kingdom called Cabul,[3] which is in Tartary, three hundred and fifty miles from Lahor, where[4] we have a public Church and a house. It is a royal city, much bigger than Milan, and very well provided with everything. We have suffered extraordinary discomforts, as the road is full of very high and very sterile mountains.

3. L'exercicio mio he l'istesso delli altri anni andar coltiuando li puochi Xpiani

3. My occupations are the same as the other years. I go cultivating the few Christians

[1] Either the news (plural in Italian) or the letters. Two of the three ships which left Lisbon on April 21, 1626, arrived at Goa on Sept. 16 and 19 respectively.

[2] To be found: letters of J. de Castro to Fr. J. Baudo for every year, either from 1602, when he arrived in India, or from 1610, when he arrived in the Mogor Mission, till 1627 and even later.

[3] Kābul.

[4] *i.e.* at Lahore.

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che uẽgono con il Re, et predicare la nostra Sta legge, ou con ragionamẽti familiarij con questi infideli ouero disputando inanzi del Re con li maestri & dotori della setta maumetana. il che si fa molto spesso, et con grande solemnita et efficacia. Del frutto non posso dire altro, saluo che solo Dio sa perche sia cosi pouco, quello che io intendo he essere causa la mia.... [*one word missing*] & pouca uirtú, l'altra causa sara la mala dispositᵉ di q^ti^ infideli pieni di sensualita & ogni altro uitio cosi gentili como maumetani.

4. Il Re continua in farci molti fauori & á me spesse uolte dona uarij presenti. Io continuo quazi ogni notte sino a meza notte *ut plurimum* stando inanzi lui como fanno gli altri cortegiani, ma bẽ sà il Re & molti di loro non he altro nostro intento, che uolergli predicare il S^to^ euãgᵒ et conuertirgli tutti alla nostra Sta legge, sebene sia con manifesto pericolo della uita & p' essere martire, como mi dixe il Re pouchi giorni sono dicẽdo che il P. non desidera altro che di spargere il sãgue p' la sua legge & di essere martire p'q^to^ he uenuto di cosi lontano e p'cio parla liberam^te^ senza rispetto nissuno quello che sa contra li maumetani & gentili.

5. Le missione poi & Padri, residenze sono l'istesse delli altri anni con pouchi Xpiani, ma due anni sono che

who come with the King, and preaching our Holy Law, either in familiar discourses or discussing before the King with the masters and doctors of the Maumetan sect, which is done very often, and with great solemnity and efficacy. Of the fruit I cannot say anything else than that God alone knows why it is so small. What I think is that the reason is my (unworthiness ?) and little virtue ; the other reason must be the evil disposition of these unbelievers, who are full of sensuality and every other vice, both the Gentiles and the Maumetans.

4. The King continues to grant us many favours, and to me he often gives divers presents. Almost every night, up to midnight *ut plurimum* (mostly), I continue standing before him, as do the other courtiers, but the King well knows, and many of them, that our intention is no other than that we want to preach to them the Holy Gospel and convert them all to our Holy Law, albeit with manifest danger of life and of becoming a martyr, as the King, a few days ago, told me, saying, "The Padre desires only to shed his blood for his law and to be a martyr; for that has he come from so far, and that is why he speaks freely, without any regard, what he knows against the Maumetans and Gentiles."

5. The Missions and the Fathers [are the same]; the Residences are the same as the other years,[1] with few Chris-

[1] The residences were at Lahore, Agra and Sāmbhar, near the Sāmbhar Salt Lake.

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il padre Supre di qta missione ha cominciato un altra misse in uno nouo regno chiamato Tibet grande como au[rete] intesso del' annua passata. In qto anno ui forono tre Padri con uno fr'llo dista di Agra uno mese di uiagio, ma p' monti altissimi & deserti. Il regulo ha fatto qto anno chiesa and casa p' li nostri, si spera grande frutto in essa misse con il fauor do.

6. In altri regni del' India scriuono che ha grãde conuersioni, maxe nella China, Cochinchina, Mad[ure], Jafnapatan &c. la p'secute nel Giapone continua con noui martiri sei[sento ?]. Li trauagli anchora non mancano, cosi nel temporale como spirituale, p'che li heretici infestano ogni uia piu tutta la India con molte naui. In qti regni anchora continuano le guerre intestine del figlio contra il Pe con grandi riuolutians. But, two years ago, the Father Superior of this Mission,[1] began another Mission in a new kingdom called Great Tibet, as you must have learned from the last Annual Letter.[2] This year, three Fathers went thither with a Brother.[3] It is a month's journey from Agra, but across very high mountains and deserts. The Kinglet has this year built a church and a house for Ours.[4] Great fruit is expected in that Mission, with the divine favour.

6. In other kingdoms of India they write that there are great conversions, chiefly in China, Cochinchina, Madure, Jafnapatan, etc. The persecution continues in Japan, with six (hundred ?) new martyrs. Troubles too are not wanting, both temporally and spiritually, because the heretics are infesting each time more the whole of India with many ships. In these kingdoms, also, the son[5]

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[1] Fr. Antonio de Andrada. His first journey to Tsaparang in Guge *via* Srinagar (Garhwāl)—Badrīnāth-Mānā, and back by the same road, was in 1624. He returned to Tibet the same way in 1625, and remained there till about 1630.

[2] The Annual letters of 1624 and 1625 sent from Goa had given information.

[3] Frs. João de Oliveira, Alano dos Anjos (*alias*:—Alain de la Bauchère), Francisco Godinho and Bro. Manoel Marques. They arrived at Tsaparang before Easter 1626, which fell on April 12. Fr. de Castro may have heard of their journey before he left Lahore for Kābul, or later: for we find that the post travelled regularly between Lahore, then the capital, and the Emperor's camp.

[4] The foundation stone was laid on Easter-day, April 12, 1626, so that in four months the news had reached de Castro at Kābul, doubtless *viâ* Agra.

[5] Khurram, later Shāh Jahān, who, as Fr. Gonçalo de Sousa has it, had had his brother Khusrū murdered on Dec. 13, 1622. V.A. Smith, *Oxford History of India*, 1919, p. 385, has "the beginning of 1622" for the date of the murder, and "a report came from Khurram that Khursrū, on the 8th (? 20th) of the month had died of the disease of colic pains (*kūlanj*) and had gone to the mercy of God." de Sousa writes of contemporary events, and his date will probably be found exact.

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tioni di q^{ti} regni.

7. Ho scritto al P^{e} Fabrisio Banfo molte altre noue & particolarita di q^{ti} regni et lo preg[aj] comunichi la letera con V. R. cosi spero fara, p'che io non tẽgo forze ne tempo p' fare l'istesso a tutti. non ho altro p' adesso che racomãdarmi alli S.SS^{ij} di V.R.

8. Al P. Schelino & altri P. conosciuti mãdo mille saluti, & alli altri nostri p'ximi S^{re} Joani Giacomo, De Castro, A S^{ri} Joani Baudo, & Picolomini.

Di questo regno di Cabul 24. di Agosto 1626.

9. La priego a ricordarsi di me nel tempo della messa et inanzi la B^{ma} Verg^{e} l'istesso faccio io ogni giorno p' V.R.

continues to wage intestine wars against his Father, causing great revolutions in these kingdoms.[1]

7. I have written to Father Fabricio Banfo[2] much other news and many other particulars of these kingdoms, and I requested him to communicate the letter to Your Reverence. I hope he will do so, because I have not the strength nor the time to do the same for all. For the moment I have nothing else, except that I recommend myself to Your Reverence's Holy Sacrifices.

8. To Fr. Schelino[3] and other Fathers known [to me] I send a thousand greetings, as also to the others, our relatives, Signore Joani Giacomo de Castro,[4] to Signori Joani Baudo,[5] and Picolomini.

From this kingdom of Cabul, the 24th of August 1626.

9. I beg of you to remember me at the time of the Mass and before the Blessed Virgin. I do the same every day for Your Reverence.

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[1] In 1626 "strange events occurred. Mahābat Khān, who had become one of the principal personages in the empire, and had taken an active part in the pursuit of Shāhjahān, found himself in danger of destruction owing to the hostility of Nūrjahān. Jahāngīr and his consort were encamped on the Jhelum on their way to Kābul, and were about to cross the river with the rear-guard when Mahābat Khān surrounded the imperial tents with his Rājput horsemen, and captured the emperor. Nūrjahān was not detained, and was allowed to pass over the river. Her attempts to recover her husband by force having failed, she managed by stratagem to effect her purpose at Kābul. Mahābat Khān was then obliged to fly and join Shāhjahān, who was hard pressed, and thinking of escape to Persia." (V.A. Smith, *op. cit.*, p. 386.) Allusions to these events must have been found in de Castro's letter to Fr. Fabricio Banfo.

[2] To be found: Fr. de Castro's letter to Fr. Fabricio Banfo (Kābul, 1626).

[3] Probably, Fr. Aurelio Schelino, mentioned in de Castro's letter from Agra, April 10, 1615. Cf. *supra*, in the introduction.

[4] The autograph has clearly 'S^{re}', not 'P^{e}' for 'Padre'. The comma between 'Joani Giacomo' and 'De Castro' should be discarded.

[5] Mentioned in de Castro's letter of Agra, April 10, 1615.

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D. V. R.
Seruo in X. ind°
† Joseph Decastro.

[P. 2] (*Address*): † /Al Molto R^do In Chr'o P. Il P^e/Joseph Baudo della Comp^a di Giesu/ 2^a Via./
Del gran Mogol. In Turino./

Your Reverence's
Unworthy servant in Christ,
† Joseph de Castro.

[P. 2]. (*Address*): To the Very Reverend Father in Christ, Father Joseph Baudo, of the Company of Jesus.
2nd Via.
From the Great Mogol.
At Turin.

(*Endorsements*): 1626* 24 Aug./P. Joseph de Castro†.
(*Provenance*): MSS. belonging to the Society of Jesus.

* * *

LETTER 2.

Fr. Joseph de Castro to Fr. Nuno Mascarenhas, S.J., Rome.

(Kashmīr, July 26, 1627.)

SUMMARY: *1. Mascarenhas' letter of 1626 received in Kashmīr; 2. de Castro's yearly letters to him and to the General; why they may have miscarried; 3. de Castro's long letter to Mascarenhas (Kābul, 1626); discussions at Court, chiefly against a Jew with a printed Hebrew Bible; 4. Christmas crib at Lahore (Dec. 25, 1626—Jan. 6, 1627); J. asks for it, helps and comes to see it; gives 1000 cruzados to defray expenses; great concourse during a fortnight; J.'s painters in the church and why; 5. results of this festa; 6. better crib preparing for 1627; Bro. Joseph Dias to be sent by the Provincial for it; new instruments and players brought by the new Superior, Fr. Francisco Leão; 7. five European Catholics bring J.. under a dais to the church; J. sits on a throne in the church, and eats and drinks; his rebuke to some Muhammadan fidalgos; visits of the Queen and the Princes; 8. religious discussions at Lahore and in Kashmīr; 9. J. ill; requests prayers; will become a Christian; crucifix valued by Portuguese and Venetians at 300 cruzados presented to de Castro (July 24, 1627); 10. evening audiences; talking of religious things; 11. J.'s frequent presents; de Castro unable to reciprocate; former presents from Goa and Rome; none these 12 years and more; Mascarenhas' not received, except an amber Madonna for Mīrzā Zū'l Qarnīn; 12. the Provincial, Fr. Valentine Carvalho, has sent a new Superior, Fr. Francisco Leão; de Andrada in Tibet; 13. Fr.*

* Endorsement; writing A.
† Endorsement; writing C (perhaps the same as B).

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Francisco Godinho has arrived in Kashmīr from Tibet, and is still with de Castro; 14. villages asking to become Christian.

[P 1.]

26
627—*
VII

*de Castro.**
P. Joseph de Castro† Goan.
1627‡ 26 Julii†.

†
Jesus Maria.
Louuado seja o santissimo Sacramento.
Pax X.

1. Recebi a de V.R. do anno passado neste rejno do Cassimir, e con ella extraordinaria consolacão por uir ella chea da m^ta^ carid^e^ q' V.R. monstra a este seu seruo (aindaq; indigno) em o S^or^ aqual rogo a D's pague a V.R. por mĩ, e peco a V.R. continue em me dar esta consolacão que pera mj, q' ando sempre en continuo desterro, sóo por uarios rejnos acompanhando este bom Rej bem pode crer q' he das majores q' *in humanis* posso ter.

2. Muito senti dizerme V.R. q' naõ recebera cartas minhas, sendo assi q' naõ deixo passar anno em q' naõ escreua a V.R. e ao N.P. Geral, o mal he q' as uezes esto tam affastado dos

[P. 1.]

†
Jesus Mary.
Praised be the Most Holy Sacrament.
The peace of Christ.

1. I received Your Reverence's[1] letter of last year in this kingdom of Cassimir,[2] and with it extraordinary consolation, as it came full of the great charity which Your Reverence shows to this your servant (although unworthy) in the Lord, Whom I pray that God may repay Your Reverence for me. And I beg of Your Reverence to continue giving me this consolation, which for me, who am always going alone, in continual exile, through divers kingdoms, accompanying this good King, is, as you can well believe, of the greatest which I can have *in humanis* (on earth).

2. I felt much Your Reverence's telling me that you had not received my letters. The fact is that I do not let pass a single year without writing to Your Reverence and to our

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* Endorsement; writing B.
† Endorsement; writing C (perhaps the same as B).
‡ Endorsement; writing A.—A. B. C. refer to the same writings as in letter I.
[1] Fr. Nuno Mascarenhas was the Assistant of the General of the Society of Jesus, at Rome, for the Province of Portugal and its Missions.
[2] Kashmīr.

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nossos q' residem em Lahor e Agra q' naõ chegam as minhas cartas a tempo q' elles mandam as suas a Goa. eu procurarej de me preuenir daqui por diante con o fauor diuino.

Father General.[1] The pity is that at times I am so far away from Ours who reside at Lahor and Agra that my letters do not reach at the time when they send theirs to Goa. In future, I shall try, with the divine favour, to forestall myself.

3. O Anno passado escreui a V.R. do Rejno chamado Cabul q' he principio da Tartaria da banda do Este confina con os Rejnos de Balq, Boqara Vsbeques. Dei notitia *ad longum* das m^tas^ e uarias disputas q' el Rej me mando fazer sobre os principais misterios da N. Sta fee con os letrados deste Rejno,, max^e^ con hum certo Judeo q' trazia a sagrada biblia empressa em lingoa Ebrea.

3. Last year, I wrote to Your Reverence from the kingdom of Cabul,[2] which is the beginning of Tartary on the East side. It borders on the kingdoms of Balq, Boqara (and of the ?) Usbeques.[3] I gave *ad longum* (at large) information about the many various discussions which the King ordered me to hold regarding the chief mysteries of our Holy faith with the literati of this kingdom, chiefly with a certain Jew, who had with him the Holy Bible printed in the Hebrew tongue.

4. Agora naõ se offerece mais de nouo q' dar nouas do prospero sucesso q' tiuemos no nosso presepio. Tornados a Lahor desse reino de Cabul me pedio el Rej fisesse o S^to^ presepio q' o queria tornar a uer, aindaq; naõ auiamos o auiam^to^ de officiais, e figuras necess^as^ pera perfeicaõ deste contudo foj D's seruido q' sahisse tam ao gosto del Rej e de toda a Corte q' todos confessauam naõ terem nũca uisto tam deuoto, e admirauel aparato como este. Foj extraord^o^ o concurso q' ouue em quinze dias q'

4. Now there is nothing new, except to tell you of the happy success we had with our crib. When we had returned to Lahor from that kingdom of Cabul,[4] the King asked me to make the Holy crib, as he wanted to see it again. Although we were not provided with the workmen and the figures necessary to bring it to perfection, yet it pleased God that it should be so much to the taste of the King and of the whole Court that all confessed they had never seen as pious and wonderful a display

[1] To be found: the early letters of de Castro to Fr. Nuno Mascarenhas and the General for 1602–27 or 1610–27.

[2] To be found in particular: de Castro's letter to Fr. Nuno Mascarenhas (Kābul, 1626).

[3] Balkh; Bokhara; Usbegs.

[4] Kābul.

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duro nũqua Jubileo nenhũm ui tam frequẽtado, nẽm festa em nossas terras como foj nossa Igreja nesses dias, uencidos da m^ta^ fraqueza o tiramos, porq; de noite, e de dia nos era necess^o^ assistir em pee declarando os misterios q' se reprentaram [*sic*] no S^to^ presepio. Fiqarãm tam contẽtes *a p^o^ usq; ad ultimũ* q' el Rej nos fez Merce de mil Crusados p^a^ os gastos e os mais nos dauam mille agradecim^tos^ p^a^ lhes fazer uer tam boa cousa em suas terras [P. 2] † e assy nos fiqaram mais bene affectos, grandes, e pequenos, sendo assy q' *alioquin* poucos ha q' gostem de nos por lhes contradizermos tanto nas disputas publicas monstrandolhes a falsid^e^ de sua secta el Rej mando pintores seus p^a^ retratar todo o aparato da Igreja pera o fazer pintar e descreuer nas suas Cronicas, como he costume delles de pintar nellas as mesmas cousas q' se referem.

as this. Extraordinary was the concourse we had during the fortnight[1] that it lasted. Never did I see jubilee so frequented or feast in our lands, as there was in our Church those days. Broken with fatigue, we took it away, for night and day we had to be on our legs explaining the mysteries represented in the Holy crib. They were so pleased *a primo usque ad ultimum* (from the first to the last) that the King gave us a present of one thousand Crusados for the expenses. And the rest gave us a thousand thanks for making them see in their lands such a fine thing. [P. 2] And so, great and small, they were left better disposed towards us. The fact is that *alioquin* (otherwise) there are few who like us, because we contradict them so much in the public disputations, showing them the falseness of their sect. The King sent some of his painters to copy the whole ornamentation of the Church, in order to have it painted and described in his Chronicles, their custom being to paint in them the very things which are related.

5. Este he o fruito q' ao presẽte se deixa uer por fora: 1° mostrarmos con o dedo os principais misterios de nossa Sta lej; 2° fazermonos mais beneuolos ael Rej, e a todos os mais. 3° fiqarmos mais acreditados diante de todos e con-

5. The fruit which appears outwardly at present is this: 1st, that we show them with our finger the chief mysteries of our Holy faith; 2ndly, that we make the King and all the others more kindly disposed towards us; 3rdly, that we are

[1] Literally: fifteen days, which, as 'quinze jours' in French, corresponds to the English 'fortnight,' *i.e.*, 'fourteen nights.' The 'sight' must have lasted from Dec. 25, 1526, to Jan. 6, 1627, *i.e.*, up to the Feast of the Epiphany, or the coming of the Magi. That makes 13 full days.

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hescidos. Querera D's tirarmos o prīcipal fruito q' he a conuersaõ e saluacaõ de suas almas.

6. Neste anno nos preuenimos con melhores officiais e materiais, hũm nosso Ir' Joseph Dias primo neste officio nos concedeo o P. Prou'al nouo, q' confiamos fara hum presepio raro, e o P. nouo Sup^or^ Fran^co^ Lian tambem trouxe nouos instrum^tos^ e tanjedores, dos quais el Rej e os mais folgaram m^to^ *Deo fauente.*

7. Fomos a receber ael Rej do seu paço ate a nossa Igreja dabaixo de hum palio m^to^ riqo. cinq; Europeos catholicos, e

more esteemed by all and better known. Would to God that we might reap the chief fruit, which is the conversion and salvation of their souls.

6. This year, we provide ourselves with better workmen and materials. The new Provincial[1] has granted us a certain Brother of ours, Joseph Dias, who is skilful in this sort of work. We hope he will make a rare crib. And our new Superior, Francisco Lian,[2] also brought new instruments and players, whereat the King and the others were much pleased, *Deo favente* (with God's favour).

7. Five European Catholics[3] and myself, we went to fetch the King and brought him under a rich dais from his

---

[1] Fr. Valentim Carvalho. His predecessor must have been Fr. Andre Palmeiro, who was Visitor of the Province of Malabar (1617), Japan and China, where he arrived in 1626; he was 8 years Provincial of Goa and Malabar, and died at Macao on April 4, 1635. He was still at Goa as Visitor in 1624. (Cf. Sommervogel, *s.v.* Palmeiro.)

Only one Valentim Carvalho, a Priest, a Portuguese, is mentioned by Franco as having come to the East between 1541 and 1723, and that in 1594, the year when Bishop Louis Cerqueira went to Japan. He appears to be, therefore, the Valentim Carvalho who was Provincial of Goa in 1627. In that case, we find on him the following particulars: born at Lisbon in 1560; entered the Society in 1578; was teaching philosophy at Lisbon, when he was appointed to accompany Fr. Louis de Cerqueira, Bishop of Japan. He had to remain at Macao, where he taught theology 4 years and governed the College during 8 years. Later, he became Provincial of Japan, and died in the Province of Goa in 1631. (Sommervogel, II. 791.) His successor as Provincial at Goa was Fr. Antonio de Andrada, the former missionary in Tibet.

Franco (*Synopsis Annalium Prov. Portugalliae*, under the year 1594) calls Carvalho: "primus in scholis patriae suae Magister Philosophiae." "He was in his fourth year of teaching Philosophy and had sent to the press the theses of philosophy to be defended as usual, when he was told to accompany the Bishop and accepted with great pleasure. He was the first who went to the Indian Missions from the new College of St. Anthony" (*ibid.*).

[2] "Fr. Francisco Leam, a Portuguese," went to India in 1612 (Franco).

[3] Jerome Veroneo, the Venetian goldsmith and future architect of the Tāj Mahāl, and Bernardino Maffei, the surgeon, were probably of the number. Angelo Gradenigo, another Venetian, may have been there too. All three were in the King's service at the end of 1627 and in 1628.

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eu con q' el Rej folgou m^to^ por ser ceremonia noua nestas terras. " el Rej se assento no trono q' lhe armamos na Igreja depois de auer uisto m^to^ a miude todo o S^to^ presepio, e as imajens da Capella. agabando todo m^to^ dizendo ser melhor este presepio uinte, e trinta uezes doutro anno. pediome de comer, e beuer, o q' lhe demos do pouco q' tinhamos aparelhado, cousa q' elle naõ faz senaõ a pessoas de m^ta^ confianza; elle mes^o^ dixe q' naõ se sabia sahir da Igreja, nem fartar de uer tam deuoto aparato, e confesso uinha elle a nossa Igreja por sermos nos seruos de Deos, e pobres religiosos; estranhou m^to^ a outros fidalgos q' por zello della sua falsa secta o naõ quiseram uir acompanhar dizendo, aonde eu uo, uos outros naõ podeis uir? q' impertinentia he essa? a reinha, Principes tambẽ uieram e a major p^e^ da Corte hũa, e duas uezes, con suas familias de noite. a major parte aproua a nossa Sta doutrina con condicaõ q' lhes naõ contradigamos a sua falsa lej.

palace up to our Church. The King was much pleased with that, as it was a ceremony new in these countries. After examining very minutely the entire Holy crib and the images of the Chapel, the King sat down on the throne which we had prepared for him in the Church. He praised everything greatly, saying that that crib was twenty, thirty times better than the one of the other year. He asked me for something to eat and drink, and we gave him of the little we had prepared: a thing he does only with persons of great confidence.[1] He himself said that he could not get away from the Church, nor look enough at such a pious display, and he confessed that he came to our Church because we are servants of God and poor religious. Other noblemen, who out of zeal for their false sect would not come with him, he surprised much by saying: "Where I go, will you not be able to go? What impertinence is this?" The Queen,[2] and the Princes too, and the greater part of the Court came a first time and a second time with their families at night. The greater part approve our Holy doctrine, on condition that we do not contradict their false sect.

8. Depois ouue em Lahor o pouco de tempo q' la estiuemos, e neste Rejno de Cassimir aonde tornamos, algũas outras disputas m^to^ altercadas diante

8. After that, at Lahor, during the little time we were there, and in this kingdom of Cassimir, whither we returned, there were some other discus-

[1] Royalty in those days, here in India, was obsessed with the fear of poisoning, and with good reason.

[2] Nūrjahān.

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del Rej da nossa Sta lej diante del Rej q' elle tambẽ quer ouuir e propor suas duuidas. as uezes se monstra mais inclinado a nossa Sta lej, outras a elles por respeitos humanos ao q' entendemos.

9. Outro dia estando maltratado, me mando pedir o encomẽdasse a Jesu X'po q' se sarasse fiqaria Xpãm. eu lhe respundi q' este era nosso officio encomendalo cada dia a N. S^re^ e a Virgem SS^ma^ por cuja intercessaõ sperauamos alcãcaria o intento tam desejado de nos. [P. 3] † Antontem me chamo el Rej e me dixe Padre se estimardes m^to^ e folgardes uos darei hũa peca boa q' me deram de presẽte q' he hũm Crusifixo. eu lhe respũdi q' lhe fiqariamos todos m^to^ obrigados por tam singular merce, antam me monstro hum Caluario con hũm crocifixo de altura quazi de hũ couado con N. S^ra^ S^to^ Joam das ilhargas e a Madalena ao pee da Crus todo de Alambre m^to^ riquo, e nos q^tro^ cantos da Crus tem as figuras dos 4. Euãgelistas de alambre branco, por todas as quatro partes do monte q' he quadrado tem os principais passos da paixaõ, resureicaõ, feitos de figurinhas do mes^o^ alambre branco con seus letreiros de letras de ouro, con uarios ornatos de uidros e cristais de Milan, e obra tam fina q' ca

sions, and very stubborn ones, before the King about our Holy law. It was before the King: for he too likes to hear them and to propose his doubts. At times, he shows himself more inclined towards our Holy law; at other times, towards them, out of human respect, as we think.

9. The other day, being ill,[1] he sent to request me to recommend him to Jesus Christ, (and said) that, if he got cured, he would become a Christian. I answered him that that was our duty, to wit, recommend him every day to our Lord and to the Most Holy Virgin, through whose intercession we hoped he would obtain the result so much desired by us. [P. 3.] The day before yesterday,[2] the King called for me and said to me: "Padre, if you esteem it much and like it, I shall give you a fine piece which they gave me just now. It is a Crucifix." I answered him that all of us would be much obliged to him for such a singular favour. Then he showed me a Calvary with a Crucifix, about a cubit high, with our Lady and St. John on the sides, and Magdalen at the foot of the Cross, the whole of amber, (and) very rich. On the four corners of the cross,[3] it has the figures of the four Evangelists in white amber. On all four sides of the mount, which is square, it has the chief scenes of the

[1] *Maltratado:* ill-treated, damaged. The next letter has *amalato* (Ital.): ill.

[2] July 24, 1627.

[3] At the extremities of the two beams of the cross, as is often done.

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foj aualiado de certos Portug^{es} e Venezianos por trezentos Crosados ao menos.

10. Daqui colligira V.R. o bom animo deste Rej e q^{to} lhe deuemos, da nossa p^{e} desejamos de o seruir melhor [*sic*] q' podemos, cada dia ate meja noite uo estar con elle como fazem os outros da Corte, porq; ally da audientia aos mais priuados, e despacha seus neg^{os} e nos temos boa comod^{e} de fallar de D's e da lej con praticas familiares ou con disputas qd^{o} el Rej o manda.

11. Elle nos fauorece con outras dadiuas a miude. o pesar q' temos hè naõ termos con q' responder, polla pouca ajuda q' temos nem da India, nem de outro ninguem, nos outros annos os Sup^{res} da India costumauã mãdar de quãdo em q^{do} seus presẽtesinhos, e cartas por sinal de agrad^{to} e de Roma tambem; agora passaõ de doze annos q' naõ ui cousa nenhũa de ninguem, nem as cousas q' V.R. escreue mãda, ca nos chegou ateagora cousa nenhũa mais q' hũa imajẽ de alãbre de N. S^{ra} pera Mirza por mais encomẽ-

Passion, and the Resurrection, made with figurines of the same white amber; and they have their inscriptions in letters of gold, with sundry ornaments of Milan glasses and crystals: such a fine piece of work that here it was estimated by some Portuguese and Venetians[1] at three hundred Crosados at least.

10. From this your Reverence will gather the good disposition of this King, and how much we are beholden to him. On our part, we wish to serve him the best we can. Every day, up to midnight, I go to be with him, as do the others of the Court: for there he gives audience to his greatest favourites and despatches his affairs, and we have good opportunity to speak of God and of the law in familiar conversations, or in discussions, when the King orders.

11. He favours us often with other gifts. What makes us sorry is that we have nothing to give in return, owing to the little help we have either from India or from anyone else. In former years the Superiors of India used to send us from time to time, in token of gratitude, their little presents and letters, and from Rome too; for more than twelve years now[2] I have not seen anything from anyone, nor the things which Your Reverence says you send; nothing until now has reached us here, except an amber

[1] Jerome Veroneo, the Venetian goldsmith, was probably there.

[2] That is, from the departure of Fr. Jerome Xavier, whose term of office as Superior in Mogor (1595–1614) had been very brilliant.

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dar q' uenham *nihil minus*.

12. Agora foj D's seruido lembrarse este nouo Prou'al Valentin Carualho mandarnos o P. Franco Lian por Supor desta missaõ q' nos da speranças de a restituir em seu pristino uigor e feruor, porq; nestes dous annos q' o P. Anto Dandrade se torno pa o Tibete, la se occupo na sua missaõ, sem podermos acodir em nada quazi e assy fiquamos em grande falta pera comprirmos as mtas obrigacois q' temos.

13. Auera dous mezes q' chegou ca o P. Franco Godinho q' torno do Tibete p' la se achar mal fiquamos agora dous mais consolados *in D'no*.

14. Das mais cousas desta missaõ, maxe das aldeas q' se querẽ conuerter a nossa Sta fee deixo ao P. Supor q' as escreuera como a quem apartencem.

Acabo pedindo a bencaõ a V.R.

Deste reino do Cassimir. 26. de Julho 1627.

image of our Lady for Mirza,[1] however much we recommended[2] that they should come, *nihil minus* (nothing less).[3]

12. It pleased God now that this new Provincial, Valentin Carvalho, should think of sending us Father Francisco Lian as Superior of this Mission. He gives us hopes that he will restore it to its pristine vigour and fervour,[4] because these last two years Father Antonio Dandrade, after returning to Tibete, kept himself busy there in his Mission, without being able to help us in anything almost, and so we were in great need as regards the many obligations we have.

13. Two months ago there arrived here Father Francisco Godinho, who came back from Tibete, as he was ill there. We are two now, the more consoled *in Domino* (in the Lord).[5]

14. News about the other things of the Mission, chiefly about the villages which want to be converted to our Holy faith,[6] I leave to the Father Superior, who will write of them, as they concern him.

I conclude, asking Your Reverence's blessing.

From this Kingdom of Cassimir, the 26th of July, 1627.

---

[1] Mīrzā Zū-l Qarnīn, the Armenian Catholic grandee.

[2] To the Fathers of Goa ?

[3] We expect *nihil majus* (nothing more).

[4] As it was in the best days of Bl. Rudolph Aquaviva (1580–83) and of Fr. Jerome Xavier (1595–1614).

[5] About Francis Godinho see my paper, *A letter from Father Francisco Godinho, S.J., from Western Tibet (Tsaparang, Aug. 16, 1626)*, in *J.P.A.S.B.*, Vol. XXI, 1925, pp. 49–73.

[6] Perhaps an allusion to the Jewish or semi-Jewish clans which Fr. de Castro mentions in Kashmīr on Aug. 15, 1627. Cf. next letter.

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D. V. R.
Filho em X. ind°
† Joseph Decastro.

Your Reverence's
Unworthy son in Christ,
† Joseph de Castro.

[P. 4] (*Address*): †/Ao P. Nuno Mascarenhas da/ Compania de Jesus Assistente/ de Portugal./

[P. 4] (*Address*): † To Father Nuno Mascarenhas, of the Company of Jesus, Assistant of Portugal.

1ª via/
Em Roma./
Do reino de Cassimir
Do gram Mogol.

1st via.
In Rome.
From the Kingdom of Cassimir of the Great Mogol.

(*Provenance*): MSS. belonging to the Society of Jesus.

* * *

LETTER 3.

Fr. Joseph de Castro to Fr. Claudio Francesco Septalio, S.J., Como.

(Kashmīr, August 15, 1627.)

SUMMARY: *1. Letter from Septalio received in 1627; 2. de Castro with Jahāngīr; J.'s kindness; he is like a Christian; 3. formerly, two Fathers at Court; now only de Castro; attending on J.; triple daily audience; 4. discussions; dispositions of J. and others; 5. J. often promises to become a Christian, as during his last illness; he does not speak of it now; crucifix worth 400 scudi for de Castro; 6. long letter to Septalio from Kābul, 1626; the Christmas crib at Lahore (December 25, 1626—January 6, 1627); 7. J.'s yearly journeys; 8. three other Residences in Mogor; 9. Jewish or semi-Jewish clans asking for baptism; 10. de Andrada in Tibet; 11. successes in other parts of the East; Englishmen and Hollanders in the Indian Seas; request for prayers for J.'s conversion; 12. the congregation at Mass on August 15, 1627; 13. request for prayers.*

[*P. 1*] *15 Aug., 1627.**
*P. Joseph de Castro.**
†
Jesus Maria.
M^to R^do In Chr'o P^e,
Pax X.

[*P. 1*]
†
Jesus Mary.
Very Reverend Father in Christ,
The peace of Christ.

1. In questo anno ho riceputo una di V.R. di Como che

1. This year I have received from Como a letter of Your

*Endorsement; writing C (perhaps the same as B in letters 1 and 2).

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mi consolo molto p' le bone noue che mi da del suo bene essere *in utroq ; homine*, et per molte altre del progresso de nostri in cotesta Prou'a, e della pace di tutta la Cristianita per le quali ne diedi le debite gratie al autore di ogni bene.

2. Le mie sono continuare anchora nella Corte di questo grande monarcha del Oriente Il Re gran Mogol Re del Industan chiamato Re Giahanguir, che uol dire conquistador tomador del mondo. il suo Padre si chiamaua Re Aqabar. cioe Re maximo. Non posso explicare a V.R. l'amore grande e beneuolentia con che ci trata q^to^ Re como se fosse ueramen^te^ cristiano.

3. Sempre ui sono statti a q^ta^ Corte doi Padri delli principali di q^ta^ missione quatro ou cinq ; anni sono che per mancam^to^ di megliori mi fu ordinato assistisse io, fu Dio seruito che sempre restasse lui contente. Il nostro officio he ogni giorno andare stare alla sua presentia como fanni li altri la sera sino a mezza notte e alle uolte anchora di giorno, perche il suo costume he ogni giorno dare audientia alli suoi Cortesani tre uolte due nel palatio alli piu nobili doue noi entriamo p' particulare priuilegio, et una in publico.

4. Quiui spesse uolte inanzi tutta la Corte ci fa il Re fare molte dispute solemni delle

Reverence, which much consoled me with the good news it gives me about your faring well *in utroque homine* (in soul and body), and with much other news about the success of Ours in your Province, and the peace reigning throughout the Christian commonweal. For all this I returned due thanks to the Author of all good things.

2. My news is that I still continue at the Court of this great monarch of the Orient, the Great Mogor King, King of Industan, called King Giahanguir, which means 'Conqueror, seizer of the world.' His father was called King Aqabar, or 'Greatest King.' I cannot explain to Your Reverence the great love and kindness with which this King treats us. It is as if he were truly Christian.

3. There always were at this Court two Fathers, from among the chief ones of this Mission. Four or five years ago,[1] for want of better ones, I was told to be with him, and it pleased God that he should always be satisfied. Our work consists in going and standing in his presence, as the others do, every day in the evening until midnight, and at times also by day, because it is his custom to give audience to his courtiers three times a day, twice in the palace to the most noble, among whom we are ranked by special privilege, and once in public.

4. On those occasions, the King often tells us to have before the whole Court many

[1] Strictly, in 1624, when he replaced at Court Fr. Francisco Corsi, who went to Sambhar as Mīrzā Zū-l Qarnīn's chaplain.

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couse della nostra Sta fede con li maestri della secta Maumetana, nelle quali lui si mostra molte uolte nostro fauoreuole, altre non puo essere p' rispeti humani, ma he pur grande fauore darci liberta di publicare p'dicare, et p'uare con ogni (sorte di ?) ragioni la nostra Sta fede, et reprouare la loro falsa secta, delche sebene loro lo portano male et ci dano molte ingiurie secretam^te^ contutto per paura del Re non ardiscono farci altra dimonstratione. et cosi al meglio che si puo nel mezzo di q^ta^ Infidelita inanzi de tanti Sig^ri^ de diuersi regni che uengono a q^ta^ Corte de diuerse nationi gentili, & maumetani *predicamus X'pum & hunc crucifixum.* il frutto Dio sa qual sia, he ben uero che potria essere mag^re^ se ui fosse megliore disposit^e^ cosi della mia como della loro parte. p'cio priego a V.R. priegui a N. S^re^ & alla Mad^a^ SS^ma^ ci faci degni operarij della sua uigne. molti sentono bene della nostra doutrina euang^ca^ la ap'uano p' bonissa ma p' rispetti humani taciono, e ci tengono particolare rispeto & amore, la mag^or^ p^e^ con zelo della sua falsa secta non ci pono uedere. con che habiamo occasione di exercitare la humilta, patientia, & carita.

solemn discussions about the things of our holy faith with the masters of the Maumetan sect. In these he often shows himself favourable to us; at other times, he cannot, for reasons of human respect; but it is a great favour that he should give us freedom to publish, preach and prove with (every kind of ?) reasonings our holy faith, and to refute their false sect; and, though they take amiss our liberty in the matter and secretly hurl at us many insults, yet, out of fear of the King, they dare not make against us any other demonstration; and thus, the best way we can, in the midst of this unbelief, before so many lords of divers nations, Gentile and Maumetan, who come to this Court from divers countries, *praedicamus Christum, et hunc crucifixum* (we preach Christ, and Him crucified).[1] God knows what the fruit is like. It is quite true that it could be greater, if there were better disposition both on my side and on theirs. Therefore, I beg of Your Reverence to pray to our Lord and to the Most Blessed Virgin that He make us worthy labourers in His vineyard. Many think well of our evangelical doctrine; they approve of it as very good; but, for human considerations, they keep silence, and show us special respect and love. The greater number, out of zeal for their false sect, cannot bear to see us, wherewith we have occasion to practise humility, patience and charity.

[1] "*Nos autem praedicamus Christum crucifixum.*" *1 Cor. I. 23.*

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5. Della parte del Re che si puo sperare piu se non che si batezi, delche me da piu uolte boni segni di uoler farlo, ouero desiderarlo. pouchi giorni sono che stando amalato mi mando dire che pregasse a N. S^re^ gli desse salute che si faria Cristiano. alche io risposi che q^to^ era mio officio e che speraua in N. S^re^ gleli daria como de facto gli diede ma il Re non mi parlo piu in q^to^ non so se sua intent^e^ fu di q^ta^ dolẽtia ou di altra uechia [*sic*] che tiene dali a pouco mi diede uno Caluario con molte figure grandi & picole di pietra gialda alambra [P. 2]† con li suoi cristali di Milano opera molto fina, & di ualore di 400. scudi in circa. Queste couse sono segni euidenti del amore che il Re tiene cosi a N. S^re^ como anchora alli suoi serui & se non si dichiara piu sara p' rispeti humani.

5. On the King's side what more can be hoped for than that he accept baptism?' In this matter, he often gives me good signs that he wants to do it, or that he wishes to. A few days ago, being ill, he sent me word to pray to our Lord that He might grant him health, that he would become a Christian. To which I answered that that was my office, and that I hoped in our Lord He would grant it him, as in fact He did. But the King did not speak to me any more about this. I know not whether his intention was inspired by that illness or by some other great fear (?)[1] he has. Not long after that,[2] he gave me a Calvary with many figures, great and small, of yellow stone, amber, with their Milan crystals: a very fine piece of work, and worth about 400 scudi. These things are evident signs of the love which the King has both for our Lord and his servants, and, if he does not declare himself more openly, it must be for reasons of human respect.

6. Uenendo l'anno passato del Regno di Cabul che he principio della Tartaria di donde scrisse largo a V.R. subito ariuati a Lahor sua Citta reale mi ordeno il Re che facessi il nostro Presepio che lo uoleua uedere, cosi lo facessimo doi Padri che erauamo, cioe il P. che assiste in quella

6. Last year, coming from the kingdom of Cabul, which is the beginning of Tartary, whence I wrote at length to Your Reverence,[3] the King told me, as soon as we arrived at Lahor, his royal City, that I should make our Crib, that he wished to see it. We did so, two Fathers of us, that is, the

[1] Perhaps the Italian should have had: *una altra vecchia paura*, 'some other great fear.'

[2] July 24, 1627.

[3] To be found: a letter of Fr. J. de Castro to Pr. Claudio Francesco Septalio (Kābul, 1626).

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Chiesa, & io piaque a N. S^re^ che riusci tanto bono, che il Re, Regina et Principi con la mag^or^ p^e^ della Corte, uenero, a uederlo restando tutti cosi satisfatti, che diceuano non auere mai uisto piu bello aparato. il Re ci diede bona quãtita de danari p' le spesse fatte, sebene lui ci aueua datto li officiali & tutta la tapecaria necess^a^ et q^to^ io gli dimandai p' lo ornato della Chiesa. Il concurso duro quindeci giorni con tanta multitud^e^ di p'sone giorne & notte che non si poteua chiudere la Chiesa. p'q^to^ aparato tutti ci restorono bene affecti, & beneuoli p' fargli uedere in sue terre cosi bono aparato, & ci ridondo in grande honore & credito. il Re volse magnare & beuere in Chiesa delle nostre cose & da nostra mano, cousa che li maumetani abominano, ma lui fa pouco caso di loro. il frutto fu monstrar a tutti con il detto, li misterij che si presentauano nella festa del nascim^to^ uenuta de maggi, & altri che stauano nelle piture della chiesa. con q^to^ bello modo diuulguiamo il S^to^ Euãg^o^ la uita de X'po N. S^re^ piacera a lui tirare il desiato frutto di q^ta^ celestiale semente. Adesso ogni anno faremo l'istesso presepio megliore con il fauore diuino.

Father who takes care of that Church and I. It pleased our Lord that it should succeed so well that the King, the Queen, and the Princes, with the greater part of the Court, came to see it, and they were all so much pleased that they said they had never seen finer display. The King gave us a good quantity of money for the expenses incurred, although he had given us the workmen and all the tapestry necessary,[1] and whatever I asked him for decorating the Church. The concourse lasted a fortnight, and such was the number of people, day and night, that we could not shut the Church. Thanks to this display, all remained better disposed towards us, and thankful for making them see such a fine sight in their lands, and it redounded to great honour and credit for us. The King wanted to eat and drink some of our things and from our hands in the Church,[2] a thing the Maumetans abominate ; but he cares little for them. The fruit was that we showed to all with our finger the mysteries represented on the feast of the Nativity, and of the coming of the Magi, and the other mysteries shown in the pictures of the Church. In this excellent way we make known the Holy Gospel and the life of Christ our Lord. It

[1] On other occasions, tapestry for the Church had been lent or given by Akbar and Jahāngīr.

[2] As a boy Jahāngīr had eaten at the Fathers' house, notably at Fatehpur Sikri, with his father Akbar. Cf. F. Goldie, S.J., *First Christian Mission to the Great Mogul*, Dublin, Gill, 1897, pp. 100-101.

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7. Ogni anno ua il Re discorendo p' li suoi regni, mi he necessº acompagnarlo et in questi camini si patisce tanto che non si puo imaginare ne non a chi lo uede and p'ua. grandmi disaggi, discõmodi & una continua inquietatᵉ di corpo & spirito. ma mᵗº contento p' farmi gr'a N. Sʳᵉ di patire p' amor suo. mi dis-(cõtẽta) assaj u(eder)mi nel mezzo di uno exercito di piu de otto (cento) mille persone tutti Infideli ou gentili, ou maumetani, de cristiani al piu quindeci ouero uinti, ma mi he necessº conformarmi con la uolũta di quello che il tutto uede & sa et sup'ta tanta infidelita, lui sa perche. sopra il mio pauiglione tẽgo sempre la bandiera con la Croce, & sopra li cameli che nel camino portano le nostre rope et ornato p' la Sᵗa messa, cosi como p' il piu gli altri portano le sue insignie p' essere connosciuti.

will please Him to derive from that heavenly seed the fruit desired. We shall now every year make the same Crib better, with the divine help.

7. Every year the King goes running about his kingdoms. I have to accompany him, and in those journeys one suffers so much that one cannot imagine it, not even he who sees and experiences it:[1] extreme privations, discomforts, and a continual agitation, bodily and mental. But (I am) very happy in that our Lord gives me the grace to suffer for His sake. It gives me much pain (?) to see myself in the midst of an army of eight (hundred)[2] thousand men, all unbelievers, whether Gentiles or Maumetans. Of Christians there are at most fifteen or twenty. But I must conform myself to the will of Him who sees and knows it all, and who bears with so much unbelief, for reasons known to Him. On my tent I always have the banner with the Cross, and on the camels,[3] which on the journey carry our clothes and the ornaments for the Holy

[1] Such too was Fr. Francesco Corsi's experience of the post.

[2] We have a clear *otto*, which, with the portion missing at the end of the line, where the paper is damaged, could not give *ottanta* (eighty), but should give *ottocento*, 'eight hundred.' I do not think that Fr. de Castro speaks of what had happened sometimes rather than of an army of 800,000 men (soldiers and retainers of all sorts) then in Kashmīr.

[3] A hundred years later, Dona Juliana Dias da Costa, who accompanied the Moghul Emperors in their military expeditions, had the cross on her banner. Cf. my *The family of Lady Juliana Dias da Costa* (*1658–1732*), in *Journ. Panjab Hist. Soc.*, Vol. VII, 1917, p. 3 of reprint.

The presence of Christian Missionaries at the Moghul Court, the honour shown them by Akbar and Jahāngīr, their oft-repeated promises of becoming Christian, the daily religious discussions, the prayers said for the King's welfare, the religious books composed for the King's instruction, the imitation by the King's painters of Christian subjects, etc., all this takes us back three hundred years earlier, to the Franciscans in the camp of the Great Khāns of China.

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8. In q^ta missione ui sono altre tre resid^e con molti x'piani, et mercãti che uano, & uengono de diuersi regni della Persia, Turchia.

9. Questo anno si sono offerti alcuni popoli a farsi x'piani, che non sono ne gẽtili ne maumetani dicono che parechi anni sono forono li suoi antecessori condoti de altri paesi qua et sino adesso si sono conseruati nella sua lege che dicono essere di Abram sebene piena di errori.

10. La miss^e del grande Tibete che parto [*sic*] di q^ta ua inanzi p' essere cominciata del nostro P. Sup^re con bone informationi che io gli p'curai.

11. Nel India si fanno grande conuersioni nel regno di Ceilano, Cochinchina, et Ethyopia. li heretici Inglesi & Olandesi impediscono assaj ogni bene temporale & spirituale con le molte naui che tengono, et cosi si patisce assaj. N. S^re ci dia il rimedio. non altro mi occore che ricomandarmi

8. In this Mission there are three other Residences[1] with many Christians, and merchants from divers kingdoms of Persia, and Turkey, who come and go.

9. This year certain peoples have offered to become Christian, who are neither Gentiles nor Maumetans. They say that, many years ago, their ancestors were brought hither from other countries, and until now they have kept their law, which they say is of Abram, although full of errors.[2]

10. The Mission of Great Tibete, which is an offshoot of this Mission, is going ahead, having been begun by our Father Superior[3] on good informations which I gave him.

11. In India there are great conversions: in the kingdom of Ceilan, Cochinchina, and Ethyopia. The heretics, English and Hollanders, greatly prevent all temporal and spiritual good with the many ships they have, and so we suffer much. May our Lord give us the remedy. I have

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[1] Lahore, Agra, and Sāmbhar.

[2] On this important passage see my comments in *A letter of Fr. Francisco Godinho, S.J., from Western Tibet (Tsaparang, Aug. 16, 1626)*, in *J.P.A.S.B.*, Vol. XXI, 1925, p. 56. At p. 73 (*ibid.*), I wrote by mistake (last paragraph) "Fr. Antonio Monserrate" instead of "Fr. Joseph de Castro."

These Jewish or semi-Jewish people make us think of the lost shut-up tribes of Israel. At a later date, about 1662, we hear of semi-Christians in Gavorstan' (Kāfiristān), and we think of the Yūsufzais. The semi-Christians of 'Gavorstan' bore the cross on their forehead and on both cheeks, like the Christians of Ethiopia; they baptised their children, etc. Cf. A Kircher, S.J., *China illustrata*, Amstelodami, 1667, p 91.

[3] Fr. Antonio de Andrada, who, though in Tibet, continued as Superior, since in 1628 he even deposed Fr. Francisco Leão, the 'Superior' of Mogor.

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alli S^ti SS^ij [*in the margin*] di V.R inanzi la B^ma Vergine & *ante altare Dei* l'istesso faro io p' V.R. la priego uogli pregare p' la conuers^e di q^to nostro bono Re et suoi regni uastissimi, et mi agiuti a corispond^e a cosi alta uocat^e.

Di q^to regno di Casimir.
15. Agosto 1627.
Seruus & frater in d^o

† Joseph Decastro.

12. Questa scrissi il giorno della gloriosa Assumptione della Madona SS^ma con grãde mia consolat^e questa matina dixi la santa messa stando a essa doi Venetiani doi Armeni sei ou sete Industani, hecoui Padre mio il nostro picolo grege in q^to exercito. altri ui erano francesi, et Portuguesi che forono a Lahor, *ego solus tota die sicut paser* [*sic*] *solitarius in tecto cum sola Vergine meditabundus ingemiscens ad eam & dicens trahe me post te V. Maria.*

Tuus in D'no.

13. *Salutet V.R. omnes p'res & f'res nostros notos et ignotos meo nomine et eos deprecare* [*sic*] *uelit ut mei memores sint in S^tis sacrifitijs et precibus eorum.*

nothing more than to commend myself to Your Reverence's Holy Sacrifices before the Most Blessed Virgin and *ante altare Dei* (before the altar of God). I shall do the same for Your Reverence. I beg of you to be so good as to pray for the conversion of this our good King and of his vast kingdoms, and to help me in corresponding with so high a vocation.

From this kingdom of Casimir, the 15th of August, 1627.
Your servant and brother in the Lord,
†Joseph Decastro.

12. I wrote this letter to my great consolation on the day of the glorious Assumption of the Most Holy Madonna. This morning I said Mass, there being present at it two Venetians, two Armenians, six or seven Industanis. That, Father mine, is our small flock in this army. There were others, Frenchmen and Portuguese, who went to Lahor. Like a sparrow all alone on the house-top,[1] I am the whole day alone with the Virgin alone, musing, sighing towards her, and saying, "Draw me after thee, Virgin Mary."[2]

Yours in the Lord.

13. Would Your Reverence salute in my name all the Fathers and Brothers, known and unknown, and be kind enough to ask them to remember me in their Holy sacrifices and prayers ?

[1] "*Vigilavi, et factus sum sicut passer solitarius in tecto.*" (I have watched, and am become as a sparrow all alone on the house-top.) Ps. CI. 8.

[2] "*Trahe me: post te curremus in odorem unguentorum tuorum.*" (Draw me: we will run after thee to the odour of thy ointments.) Cant. I. 3.

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[P. 3] (*Address*) : †

Al M^{to} R^{do} In Chr'o P Il P^{e} Claudio Francesco Septalio della/ Comp^{a} di Giesu.

1^{a} via.

Del gran Mogol. In Como.

[*P. 3*] (*Address*) : † To the Very Reverend Father in Christ, Father Claudio Francesco Septalio, of the Company of Jesus.

1st via.

From the Great Mogol. At Como.

(*Provenance*) : MSS. belonging to the Society of Jesus.

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Notes on Khorasani Kurdish.

By W. Ivanow.

The materials for the study of the dialect that is spoken by the Kurdish tribes inhabiting Northern Khorasan consist apparently so far only of a number of words that were collected by A Houtum-Schindler, and which were published by him in his "Beiträge zum kurdischen Wortschatze," Z.D.M.G, vol. 38 (1884), pp. 43–116.[1] In 1918–1920, during my residence in that part of Persia, I collected about 400 specimens of Kurdish poetry and tales which give a more definite idea of the language which the Kurds of Khorasan speak. As the subject is one of considerable interest to students of Kurdish language, a brief outline of the main features of this dialect is here given, to which is added a vocabulary, and a number of typical specimens of popular poetry and prose.

Historical information concerning Kurdish migrations to Khorasan were briefly summarised by Houtum-Schindler in his article, referred to, and a short note on their present distribution in the province was given in my paper, "Notes on the ethnology of Khorasan," which was published in the Geographical Journal, Vol. LXVII, 1926, pp. 143–158. For the convenience of the reader the most essential points are here repeated.

It is difficult to find without special research if there were a Kurdish population in Khorasan before the XVIth century. Under Shah Ismaʻīl the First (1502–1524), a number of Kurds were transferred and settled there. These were followed by others later. Their immigration continued in the XVIIth century, under ʻAbbās I (1587–1628), and later on; a movement was recorded in the reign of Nādir (1736–1747), which was probably the last. Owing to the difficult means of communication and perturbed state of Persia in the XVIIIth century, the connection of these emigrants with the portions of their tribes that remained in Kurdistan proper was apparently severed at an early date.

Of the four tribes which were regarded as original, i.e., the Amarlu, Kaywanlu, Zafaranlu and Shadulu, the first two lost all their former importance, whilst the other two ceased to be regarded as Kurds, being mostly Turkish-speaking. The

[1] E. Berésine, *Recherches sur les dialectes persans*, Casan, 1853, contains in its part III a number of 'Eastern Kurdish' words. As the book is not accessible to me at present, I cannot state whether the dialect is Khorasani Kurdish or not.

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present principal sub-divisions of the Kurdish-speaking tribes from North to South, are as follows:

1. *Melanlu*,—in Qūshkhāna and some other places in the Northern part of the district of Isfarain; in Juwayn; in the extreme North of the Nishapur district.
2. *Bajgiranlu*,—a small tribe living near Bājgīrān, a frontier village on the Mashhad-Askhabad road.
3. *Aghazlu*,—near Āghāch, West of Bājgīrān, along the frontier.
4. *Hiwalanlu*,—North of the district of Quchan, and in Derregez.
5. *Kuranlu*,—also North of Quchan.
6. *Qasmanlu*,—Nāwukh, Dizāwūn, etc.
7. *Mashkanlu*,—near Māshkān, in the district of Quchan.
8. *Burji*,—near Rādqān, in the same district.
9. *Kaywanlu*,—in the Juwayn, Quchan, and Northern Nishapur districts.
10. *Mazhdakanlu*,—in Northern Nishapur and in Quchan districts.
11. *Shadulu*,—in Bujnūrd, and 12. *Zafaranlu*,—in Shirwan, as stated above, are now regarded as Turks.

All these tribes live mostly settled, or as "half-nomads," cultivating fields in the summer and migrating with their flocks in the winter; there are also pure nomads amongst them. The following tribes consist *chiefly* of nomads:

13. *Rashanlu*,—in Khākistar, Lāīn, and as far to the East as Chahcha.
14. *Briwanlu*,—near Chahcha, in the summer in Kelat.
15. *Badiwanlu*,—in Derregez (winter), and Quchan (summer).
16. *Hafshalanlu*,—in the same place as the preceding tribe.
17. *Jafkanlu*,—in Chamakalur (winter), or Kūh-i-Daulat (summer).
18. *Karamanlu*,—in the Northern parts of the Nishapur district.
19. *Waranlu*,—also in the same district, a small tribe.
20. *Tupkanlu*,—in the districts of Juwayn and Nishapur; in the winter they migrate across the valley of Sabzawar to the Dasht-i-Tāqī, the border of the great Central Desert.
21. *Amarlu*,—in and around Moris, or Morushk, a village N.W. from Nishapur, on the road to the turquoise mines.

These tribal names are not reliable for historical research. They change continually; an identification of the tribes in Kho-

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rasan with those in Kurdistan proper based merely on the similarity of their names is therefore highly improbable.

Although it seems certain that the original settlers spoke in different dialects, one is compelled to think that three hundred years' residence in Khorasan led to the formation of quite a uniform language. Most probably it grew from the speech of a dominating community, which gradually assimilated all other dialects of minor groups. The Kurdish of Khorasan, as it is spoken now-a-days, appears to belong to the pure Kurdish, or North-Western family of dialects, but is not identical with any known tribal idiom. This relation with the Northern group is clear not only from the existence in Khorasani of a large number of words peculiar to the vocabulary of the Northern tribes, but also from some grammatical usages, such as the wide use of the personal verbal suffixes *-ma*, *-ya*, *-na*, etc.; from the forms of the personal pronouns, which are typically Northern; from the rare use of the personal pronominal suffixes, etc. There are, however, traces of some admixture from the Southern dialects, such as the alternative forms of personal pronouns; *min*, *ämä*, *awon* (or *awono*); also some isolated terms in the vocabulary, etc.

The Khorasani Kurdish language itself has no division into subdialects, and although there are local peculiarities in the pronunciation, or some words are used only locally, etc., these appear unessential. Much greater is the difference caused by the influence of the neighbouring languages. From this point of view two "spheres of influence" are seen in Kurdish. The Kurds of the Northern districts of Khorasan, who come into close contact with the local nomadic and settled Turkish tribes, are greatly influenced by their language. In fact "Turkisation" has been carried so far that several tribes (as mentioned above) have entirely lost their Kurdish tongue, although the tradition is still fresh about their being closely connected with other Kurdish tribes a few generations ago.

In the Southern districts such as Juwayn, Sabzawar and the Mashhad-Quchan valley, all Kurds speak a rustic Persian as their second language. Although these Persian-speaking Kurds are not so numerous as those speaking Turkish, the influence of the Persian phonetical usages and of the dictionary are far more prominent with the Khorasani Kurdish than those of the Turkish dialects. This is because the latter themselves have undergone a great modification, and often indirectly transmit also the Persian phonetical features which they have adopted.

There is no literature in Khorasani Kurdish, and it is exceedingly difficult to obtain a specimen of good Kurdish written language. If necessity compels the Kurds to write, they do use not their native tongue, but either Persian or Turkish, whichever is more familiar to them. Those few who are able to

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write, have great difficulty when asked to write in their own language. There is no traditional and standardised orthography, and the great simplicity of Kurdish syntax compared with Persian, and especially Turkish, adds to the difficulty of rendering the usual florid expressions, customary in letters. In fact it may often be found that the Kurds write, in reality, in Persian and Turkish, mechanically substituting Kurdish words for the equivalents in those languages, if it is insisted upon that they were to produce a specimen of written Kurdish.

This creates an almost insurmountable difficulty for a proper research in the grammar of the dialect. The popular songs are usually very primitive, and use abrupt sentences. Their analysis gives no material concerning the formation and the use of the comparatively rare grammatical forms, and it is almost hopeless to try to get explanations from the unsophisticated peasant or shepherd which the average Kurd generally is.

The popular poetry is rather extensive, but consists almost exclusively of tristichs.[1] I cannot tell if there are real "bards," or "minstrels" who specialise on Kurdish songs. The *lūṭīs* who sing and play at weddings or other festivals usually produce Turkish poetry, in the local dialects or Jaghaṭāī, rarely in Turkmani. There are also fragments of songs by professional poets, such as those ascribed to Ja'far-Qulī, but usually they are so badly preserved that one is forced to treat them as being uncongenial to the spirit of oral Kurdish poetical tradition, or rather as imitations of Turkish poems.

A tristich of this kind usually consists of three lines, each containing eight syllables, with a clear caesura after the fourth syllable.[2] Sometimes there are lines of seven, or even five syllables. The latter type is rare, and belongs to the songs of "dancing music."[3] All these poems are sung, never recited.[4]

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[1] Tristichs as a form of poems are also popular in Kurdistan proper. O. Mann gives a few of them, in the Mukri dialect, on pp. 276–280 and 298–302 in "*Die Mundart der Mukri-Kurden*," Kurdisch-Persische Forschungen, Abt. IV, vol. III, Teil I (1906). Among the Persians and the Central Asian Turks, who are the immediate neighbours of the Kurds, tristichs are never used, and the popular form is the quatrain, consisting of four lines, each composed of eleven syllables. Cf. my notes on Khorasani rustic poetry in the *J.P.A.S.B.*, vol. XXI (1925), pp. 233–313. The Kurds call their tristichs *bäyt*.

[2] The use of the inner rhyme is very rare, cf. further on, specimens, No. 188. At the end of the lines the rhyming syllable is usually the same (*aaa*), but often there are some irregularities so that one of the three lines does not rhyme with the others, or there is no rhyme at all.

[3] Kurdish dances are very primitive and are danced by men only in public, in pairs; they are distinguished by their time. The names of the dances are (called after the tune to which they are danced), slow (*walangar*): *rosta, owghoni* (*Afghānī*). Fast are: *sarbozi, moti-moti, shelengi, kalatei, chub-bozi*. They are mostly borrowed from other nations, and not Kurdish in origin.

[4] The melodies are often improvised. Or they may be rather free variants of some "fashionable" standard motives. In 1919 these were:

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The tristichs follow each other in an arbitrary order, just as they are remembered by the singer, regardless of their contents, having no permanent "series" or "chains."

From the point of view of technique they usually consist of two parts: the first, corresponding to the first line, gives a very brief picture of the surrounding landscape,[1] a detail in the beautiful features or the attire of the beloved, or some dominating emotion.[2] The two other lines constitute the principal part of the poem, and express the reflection, in a laconic and rather abrupt way.

On the whole these tristichs appear to belong to an "impressionistic" school, not unlike Japanese poetry, as far as the creation of a primitive pastoral Kurd can be compared to the production of a skilled artist. They are "static" in their motive, defining some emotional moment from psychical experience, with the utmost economy of words. They never contain a "story," however short, but always deal with a single individual fact. It is singular that a people with such a long fighting past, like the Kurds of Khorasan, take little interest in epic poetry. My long and persistent search for poems of this kind was unavailing. I found but a few "cycles" of tristichs, dealing with events; these were in the same "impressionistic" style; the subject was usually the death of a hero.

Probably the cause of this is the strange abruptness of thought which is common to all peoples living a simple nomadic life. This feature is reflected in the Kurdish syntax which avoids complex sentences. In every Kurdish poem of this kind are given only the "brightest spots" of the picture; all intermediary tones are omitted. The European poet who would translate these songs and render them intelligible to his readers, would have to reconstruct these omitted passages; in fact, he would have to "bridge" the Kurdish abrupt sentences together.

These short poems are usually widely known, and must be of fairly old origin. Their authors are never known; new additions or variants are constantly forthcoming, but only a small percentage of these can be treated as familiar to all tribes.

The poems, or rather fragments, not belonging to this popular form, may be productions of some poets of note. But their names are also rarely preserved. My informers invariably ascribed all such fragmentary poems to Ja'far-Qulī, of whom I could not find any reliable biographical details. The cycles of songs deploring the death of some hero are usually attributed

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zori-zori (sad), *Sowna-jon*, or *Sanam-jon*, *Mole-Ma'ṣuma*, *Alow-jigi* (used for dancing music), *Jaja* (also for dancing), etc.

[1] Cf. *doroy ikde gul keriya*=the sanjad tree is in blossom; or *zha ben ma-dho konyo kask-ä*=below me there is a green (place near the) spring, etc.

[2] Cf. *dil wa dordo dil wa dordo*=Sorrow in the heart (twice), etc.

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to the sister of the deceased,—not to any other of his relations, or friends.

Kurdish fairy tales are interesting from the folklore point of view, especially since nothing has been published on this subject, not only in regard to the Kurds of Khorasan, but also to all their immediate neighbours. Unfortunately, I found these tales beyond my power to write down from dictation. The primitive Khorasani Kurds find it impossible to tell them slowly and distinctly. Every demand for repetition leads to a complete change of sentence, and sometimes even to a complete change of the subject itself. The literate disclaim all knowledge of such "old women's nonsense," and it was with great difficulty that I succeeded in obtaining a few stories in prose which were written by an "ākhūnd," or mullā.[1]

I. Notes on Khorasani Kurdish Phonology.

It would be wrong to treat the phonetical system of the Kurdish of Khorasan independently. The dialect has experienced great alterations in this respect due to influence exercised by local colloquial Persian; in fact, the phonetical rules in this Kurdish are practically the same as those in the rustic Khorasani Persian. Therefore it would be appropriate to mention here those points of the system only in which Kurdish differs from the rustic Persian of Northern Khorasan.[2]

A few general remarks may be useful:

1. Like the Khorasani colloquial Persian, the Kurdish dialect avoids all sounds which may be called emphatic and require special efforts to pronounce. Although Kurdish speech sounds, in general, more guttural than Persian, the majority of sounds are pronounced in the same "lazy" manner, so different from that of Arabs, etc. As is usual in the speech of the uneducated, the words undergo a great deal of mutilation through frequent syncopa, metathesis, "swallowing" of the endings, etc. Arabic loan-words especially undergo amazing alterations.

2. As far as I can understand, in this dialect, just as in colloquial and dialectical Persian, there is nothing in the nature of the vowels which may be described as inherently, absolutely, or proportionally "long" and "short." I paid special attention to this, and whenever I tried to verify the statements of different writers on the subject, I invariably discovered that this division depends on either of the following

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[1] This man, Mullā 'Alī, was from Juwayn, and although a Kurd, he spoke chiefly Turkish. His education was very poor and when he wrote in Persian he made many orthographical mistakes.

[2] On the phonetical system of the rustic Persian of Khorasan see my paper in the *J.P.A.S.B.*, vol. xxi, 1925, pp. 242–249.

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principal causes which have never been properly taken into account :—

(*a*) accent, which makes a vowel clearer, "brighter" than others, or more prominent, "longer";

(*b*) favourable "consonant surroundings" which help the vowel to attain similar "clearness," or prominence;

(*c*) the transfer of orthographical ideas into the field of phonetics, and mixing the traditional conceptions concerning prosody, etc., with observations of sounds. A vowel in literary Persian, marked $\bar{a}$, is far too often treated as such in the systems of phonetical transcription. In reality it is a sound similar to an English *a* in *all*, or frequently an *o*, having almost no element of a guttural *a* in it.

Therefore, finding that the division of the vowels into "short" and "long" ones does not exist in reality,—at least as far as I can rely on my own ears,—I decided to mark here a vowel as "short" or "long" only if it deviates too much from the normal, is short or long in excess.

3. In a dialect like Khorasani Kurdish which has completely adopted the phonetical system of colloquial Khorasani Persian, there is an enormous variety of shadings in the *timbre* of every vowel. Every individual pronounces the same sound differently, and even without any apparent reason will vary his own pronunciation of the same word or vowel. From the point of view of the "absolute pitch" it is probably possible to class all shadings of the seven elementary sounds in rows that gradually converge :—

a_1 a_2 a_3.....a_n (which almost coincides with $\ddot{a}_1$)
$\ddot{a}_1$ $\ddot{a}_2$ $\ddot{a}_3$.....$\ddot{a}_n$ (,, ,, ,, ,, e_1)
e_1 e_2 e_3..... e_n (,, ,, ,, ,, i_1)
i_1 i_2 i_3..... i_n (,, ,, ,, ,, $\dot{i}_1$)
$\dot{i}_1$ $\dot{i}_2$ $\dot{i}_3$..... $\dot{i}_n$ (,, ,, ,, ,, u_1)
u_1 u_2 u_3.....u_n (,, ,, ,, ,, o_1)
o_1 o_2 o_3.....o_n (,, ,, ,, ,, a_1)

It will be impossible to identify all the shadings which occur in pronunciation, and it will be misleading to select a few of them in each row, only those which may be similar to sounds in a European language. Therefore it would be better to adopt one sign for each elementary vowel only, remembering that it is merely the approximate expression for one of many minute shadings that could never be properly recorded without the help of special instruments.

4. The alteration of both vowels and consonants, is also a phenomenon which appears with great irregularity in

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the pronunciation of different individuals. This may be referred to especially in the changes that are due to synvocalism in individuals influenced by Turkish linguistical usages. These people may "synvocalise" the sounds on one occasion, but may leave them unchanged at others.

5. Accentuation in Khorasani Kurdish, like in colloquial Persian, is not so sharp as it is in many European languages, or as it is in the colloquial Persian of Yazd. It is attained by a slight prolongation of the accented sound rather than by raising the voice.

Description of Sounds.

The following list of sounds with their detailed description can be used also as the table of transliteration which is adopted in this paper.[1]

VOWELS: *a*, *ä*, *e*, *i*, *i̇*, *u*, *o*; these may be long or short in pronunciation, depending on the intonation. Diphthongs: *ay*, *aw*, *äy*, *äw*, etc.

CONSONANTS: guttural—*h*, *ḥ*.
gutturo-velar—*q*, *gh*, *kh*.
gutturo-nasal—*ṇ*.
velar—*k*, *g*.
velar and lingual—*ḳ*, *ǵ*.
lingual—*y*, *l*, *l̇*, *r*, (*rr*).
palatal—*ch*, *j*, *zh*.
cerebral—*ṭ*, *ḍ*.
front-palatal—*s*, *sh*.
dental—*t*, *d*, *dh*, *z*.
naso-dental—*n*.
labio-dental—*v*, *f*.
labial—*p*, *b*, *w*.
naso-labial—*m*.

Vowels.

a,—is a comparatively clear guttural sound, approximately like *a* in "*father*." The shadings are numerous, and have a general tendency to be pronounced like *ä*, especially in the places where Persian is much used.

ä,—has a great variety of shadings, from an almost pure guttural *a* to *e* (cf. English *but*, *bet*, *bird*, etc.). It is rarely heard after gutturals or after *y*; sometimes it sounds like *u* or

[1] This system of transliteration is applied in this paper only to *Kurdish* words. The Persian and Turkish idioms are transliterated, according to their standard orthography, as usual, with the help of the system which is universally adopted. Names which are common are given in the form as used in general English literature, without diacritical marks.

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i, in corrupted Persian and Arabic loan-words, but these cases constitute exceptions.

e,—is usually a short sound of indistinct *timbre*. In clearer cases it sounds like *ä*, but is also indistinguishable from *i* when it appears as an euphonic "after-sound" with difficult groups of consonants.

i,—has also many shadings; when indistinctly pronounced it approaches *e*; but when clear, sounds like *ee* in the English word "*meet*," or *i* in "*fit*." It is singular that in the pronunciation of a great many Kurds should *i* follow *q*, *kh*, *k*, *s*, *sh*, *r*, *zh*, it always requires an "introductory" sound, *w*, *u*, or (German) *ü* (which is used only by Turkish-speaking Kurds). So: *khwin*, *qwin*, *shwir*, *rüie*, *zhuir*, etc. (cf. Sc., p. 260, § 53).[1] It is at the same time usual, especially in the Persian loan-words that are taken from the colloquial speech, to make *i* correspond to the original *u*.

i̯,—is a sound which is comparatively rare in Persian, though frequent in Turkish and other languages It is pronounced with the tongue flatter than in the case of the ordinary *i*, not reaching the palate, but touching the side teeth, so that the stress of the sound is concentrated above the front teeth, under the nose (cf. *o* in "*women*").

u,—varies from a clear *w* to a long *oo*, as in "*foot*." The sound *ü*, as mentioned above, is rare, except in the speech of the Kurds who use Turkish as their second language. These often introduce it instead of the ordinary *u*.

o,—has a great variety of shadings, from an *o* pronounced with the lips almost shut, approximating to *u*, to an *o* pronounced with an almost open mouth, sounding like *a* in "*all*," which corresponds to the orthographical long *ā*. The sound *o* may also correspond to the orthographical short and long *u*, or even the short *a*.

Consonants.

Guttural.—*ḥ*,—is almost as harsh as in Arabic. It is not universal, but often heard. Some individuals pronounce it very harshly: *ḥarra*, *doḥwi* (Ar. *da'wā*), etc. The ordinary *h* is also often harsher than in Persian.

Gutturo-velar.—*q* and *gh*,—are not much emphasised, and apparently never attain the harshness with which they are pronounced in Arabic. These two are often confused; *q* also is

[1] For economy of space, the following abbreviations are introduced in this paper: M.=O. Mann, Kurdisch-Persische Forschungen, Abt. iv, Band iii, Teil i, Die Mundart der Mukri-Kurden (Berlin, 1906); Sc.=A. Socin, Die Sprache der Kurden, in the Grundriss der Iranischen Philologie, vol I, part II; Sn.=E. B. Soane, Grammar of the Kurmanji or Kurdish Language, London, 1913 (unfortunately, only these three works on Kurdish dialects were accessible to me here, in Calcutta, besides A. Houtum-Schindler's list). P.=Literary Persian; T.=Turkish (in general sense, or as Central Asian Turkish).

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sometimes pronounced in a softer way, as *kh*, which often is as harsh as the Western Persian, not the Khorasani *kh*. It is remarkable that in this dialect the combination *khw* at the beginning of words is often met with: *khwadhe*, *khwin*, etc.

Gutturo-nasal *ṇ* appears only immediately before *k* or *g*.

Velar.—*k* and *g*,—are the same as in Persian; *g* is rarely pronounced like *y* (*diyar* for *dīgar* that is so common in Khorasani Persian). I noticed only a few cases like *biyer*, etc. (from *girtin*). Both *k* and *g* are sometimes pronounced like in Turkish (the tongue touching side-teeth), which gives them a slight additional sound of *y*: *k̇*=*ky*; *ġ*=*gy*: *k̇at*=*kyat*, etc., in which *y* is pronounced at the same time as *k*.

Lingual.—*y*,—is often a very highly pitched *zh*. *l* sometimes becomes cerebralised into *ḷ*, which sounds like *ll* in "*well*," "*all*," etc. *r* sometimes becomes "rolling" *rr*: *ḥarra*.

Palatal.—*ch* and *j*,—are the same as Persian; *zh* is like *j* in French "*jour*." It may be also pronounced softly, almost like a *y*.

Cerebral.—*ṭ* and *ḍ*,—are simply "hardened" dentals, under the influence of other consonants, especially in groups.

Front-palatal —*s* and *sh*,—are the same as Persian.

Dental.—*t* and *d*,—are articulated lower, nearer to the edge of teeth than in English. So is the *naso-dental n*. Very often *d* is pronounced in so low a position that it sounds like *dh* (*th* in "other"). This sound, however, is elusive, and often appears as a real *ḍ* in *khwaḍe*=*khwadhe*.[1] *Th* probably does not exist, except as a defect of speech, for *s*.

Labio-dental.—*f* and *v*,—are the same as in English.

Labial.—*p*, *b*, and *w* are the same as Persian; *b* and *w* are often mixed in pronunciation; *m* at the end is very indistinct, like *n*; both are often reduced to the state of a slight nasalisation in the final syllable.

Modifications of the sounds.

The regular phonetical deviations of Kurdish from Persian have been dealt with in detail by F. Justi in his "Kurdische Grammatik" (St. Petersburg, 1880), and briefly summarized by A. Socin in his article on the Kurdish grammar in the Grundriss der Iranischen Philologie, vol. I, part II, pp. 255–272. It seems that as far as the purely Kurdish element in this dialect is concerned, all the observations of the phonetical system of the North-Western subdialects in Kurdistan proper are quite good for this dialect. There are also many other alterations which are extremely irregular. These are due to the fact that Kurds, being an illiterate people and mixing only with the

[1] Apparently the same phonetical phenomenon which existed in Sogdian.

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lowest classes of Persians and Turks, usually pick up Arabic, Persian and Turkish words which are in a corrupt, "slang" form. To these alterations they add many of their own, so that, in the end, one has to deal with a multitude of peculiar modifications which appear quite accidental. A few examples of common words of an Arabic origin may give some idea of these changes: *riskat=rukhṣat; hisir=asīr; zabor=zawwār; kor* (or *qor*)*=qahr; jow=jawāb; kasoy=qaṣṣāb; dene=dunyā; nuwo=nawbat; sholon=in shā'a'l-lah; khire=khayr; hifo=ḥayf.*

All alterations due purely to the phonetical rules of Khorasani Persian are dealt with in my paper on the phonetics of that tongue, see *J.P.A.S.B.*, Vol. XXI, 1925, pp. 241–249, and here nothing special requires to be added.

II. Notes on Morphology.

1. NOUNS. (*a*) The suffix *-ak, -äk*, which originally has some diminutive meaning, and is added pleonastically to substantives, sounds exactly like the other suffix *-äk, -ek*, used as an equivalent of the indefinite article. It appears that probably under the influence of Khorasani Persian phonetical laws this suffix may be abbreviated into *-ä: e.g. barfä*, for *barfak*. It is also peculiar that the suffixes of the Plural are seldom added to this diminutive *ak*.[1]

(*b*) The determinative affix *-a, -ä, -e, -i* (M., p. xlviii, and Sc., pp. 274-275), although much used, is also seldom added to the suffix *-ak*. It is almost always affixed if the noun is used in an oblique case, particularly with a preposition: *zha Shohrute, zha Turwati*=from Shahrud, from Turbat; *yeke bedha yodegorä*: give (me) one as a souvenir. It is often used after the suffix of the Plural *-on*.[2]

(*c*) The affix *-e, -i*, which is an equivalent of the indefinite article, seems to be more used in this dialect than the suffix *-ek*.

(*d*) The suffixes of the Plural are the same as in other Kurdish dialects but pronounced in a Khorasani Persian way, *i.e.*, as *-o* (=P.*-hā*), and *-u, -un, -on* (=P. *-ān*).[3] Suffixes *-id, -gal, -chal, -al*, etc.,[4] are apparently never used here. It is

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[1] This peculiarity is chiefly observed in the dialect of Bayazid, cf. Sc., p. 277, § 162, with which Khorasani Kurdish apparently has many affinities.

[2] This affix seemingly exists also in colloquial Persian (at least in Khorasan). It differs from the definitive *-ī* (*yā-i-ishārat*) in its having no correlative sense: *märdäkä=the* man; *Hasanä=the* (particular) Hasan, etc. It seems to me highly probable that in its nature this affix is identical with the suffix *-a* added to verbal forms, as will be mentioned further on.

[3] According to Sc., § 160, the loss of the final nasal is also not rarely observed in the dialect of Bayazid.

[4] Cf. M., p. lvii; Sn., pp. 10-11; Sc., p. 278.

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peculiar that in this dialect the following suffixes are also used very frequently: *-in, -iṇ, -en*, cf. *qiziṇ, chowen*, etc. These may be connected with the Mukri suffix *-ina* (M. p. lvii), or may be a phonetical modification of the usual *-ān*. Very often (as in Persian) the Plural is not expressed by a suffix, especially if the noun appears in one of the oblique cases. There is also an affix *-e*, which may be that of the Plural (or Dual ?), as in *chowe*=eyes; *bere*=eyebrows; *jewe*=twins but it may be only a definitive affix added to the Singular.

(*e*) The cases are chiefly formed with the help of different prepositions. The Genitive usually is expressed by the *iḍāfat*, as in Persian; this sounds *-e-, -i-, -o-, -a-*, and more frequently than not is sharply accentuated. In monosyllabic words this is oftener the case than in other nouns: *delé ma, molé ma, pilé khwa*, etc. But on the other hand the *iḍāfat* sometimes may be omitted (cf. Sc. p. 276, § 156, and M. p. lv).[1] The Possessive is often expressed as in Persian by the preposition *zha*=*az*, cf. *zha bagona*=belonging to (the family of the) headmen. I must note also that some individuals pronounce *zha* softly, like *ya*.

The Dative is mostly expressed by the prepositions *wa* and *la*, sometimes also *zha* (cf. *zha yore miṇ*=for my friend=P. *az barāyi-yār-i-man*), or *sawo*. The particle *ro* (=*rā*) is sometimes added, but usually omitted (cf. Sc., p. 276, § 158): *wa moyon ro, sawo taro*, etc. The affix *-i, -e* (cf. Sn., p. 13) most probably is merely the phonetical variant of the determinative *-a: chuma shigore*, but *chuna mol*, etc. Cases of the affix *-dho* (=*dā*), used after the preposition *wa* (=Western Kurdish *bi*) are not numerous: *azi tarum wa rryo khwa-dho*=I am walking along my road. This may be, however, not the Dative, but the Locative.

The Accusative apparently has no special suffixes for its expression. The particle *-ro* seems to be very rarely used (if it is used at all). In cases like: *Ogho bedha Fotimäyä* the final *-ä* is probably only the determinative=Imam, give (me) *the* (certain) Fatima.

The Ablative is formed by the preposition *zha*, and the affix *-do* or *-dho* (=*dā*) at the end: *zha mol-dho*=from the house. But this *-do* may be omitted: *zha Morise*=from Moris.

The Locative is formed by prepositions *wa, da, dar, bar, sar, la*, etc., accompanied, or not, by *-dho* at the end.

The Vocative (cf. Sc., p. 277, § 159; M., pp. lv-lvi; Sn., p. 17) has here a regular suffix *-u* (or *-e*): *lowuku, shawonu* (or *shawone*), etc. This is especially noticeable in the abbreviated, "call" forms of proper names: *Mamu*=*Muḥammad*;

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[1] It is peculiar that the *iḍāfa* is not only used for the connection of two nouns, but also for the syntactic dependence (cf. Sc., p. 276, § 157), as in the following sentence: *haldagirum khwaṇge tu te*=I am going to take (=marry) the sister of (the man who) comes there.

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Hasu=Ḥasan; Husu=Ḥusayn; Iwu=Ibrāhīm; Isu=Ismail; Ramu=Ramaḍān (-'Alī); Jafu=Ja'far; Kulu=Ghulām-Riḍā, etc. The feminine names have the suffix *-e, -i: Khoji=Khadīja; Fote=Fāṭima; Zore=Zuhrā*, etc. The interjections used with this case mostly are: *lu, lo, alo, halo, eho, hu*, etc.

(*f*) *Adjectives.* Nothing special may be mentioned in this connection. The *iḍāfat* with the Adjectives follows the same rules as those for the formation of the Genetive case of the Substantives. The degrees of comparison are like those in Persian. The suffix *-in* is frequently used to form Adjectives, and probably corresponds to the Persian suffix *-ī*.

(*g*) *Numerals.* A few numerals have some phonetical peculiarities: 9=*na*; 30=*sị*; 40=*chal*; 50=*penje*; 60=*shist*; 70=*hofṭị*; 80=*hashṭị*; 90=*nut* (*or nutun?*).

2. PRONOUNS. These differ from the forms in various Western Kurdish dialects only in their phonetics. Besides, there are traces of the parallel use of pronouns belonging to the Northern and the Southern groups. The use of the personal pronominal suffixes is very rare, and it seems these are merely forms borrowed from the Persian (cf. Sc., p. 272, § 142, and M., p. lxii, who maintains that these suffixes are genuine and original in Kurdish). It is rather difficult to find an example of these, except the rare cases of the suffix of the first person: *dilem ber won kachiko*=those girls stole my heart; but exactly a similar example is given by Socin (Sc., loc. cit.).

(*a*) *Personal pronouns.* Ist person: *az, azh, äz;* before a word beginning with a consonant an euphonical *ĕ* or *ĭ* (very short and elusive) is added: *azĭ tema, azĭ nema*, etc. The forms of the oblique case vary in pronunciation: *ma, mä, me, mi* (*mu*), or with nasalisation: *män, min, mịn*, etc. The particle *-ro* (=*rā*) is rarely added to all persons. It is peculiar that the forms of the oblique case used in the sense of the Dative are mostly *me* or *mi*, and those for the Accusative—*ma* or *mä*. Sometimes it appears as if the form *az* is used also in the sense of the Accusative: *kurme kuti az dakhoren*=evil worms are devouring me. It seems that the determinative affix which is added to nouns may also be added to the pronouns: the forms *azĭ, azĕ*, mentioned above, may be explained in this way; also forms like *khuine mano*=my house; *ilchie mano*=my messengers.

The Plural is *am, ham, amä* (a Southern form); the oblique case is the same as in the Singular: *ma, mo* (rarely *moro*: *ta wa moro zäwon basti*=thou art silent to *us*).

IInd person: *tu, to, ti, ṭị, ta.* Oblique case: *ta, tä, te, ti* (rarely *tara, taro*: *sawo tara az awdolum*=for thy sake I have become a wandering darwish). Plur. *hun.* Obl. case *haw* (?) is very rarely used.

IIIrd person: *aw, wo, wa, wi, wu* (this pronoun is also used as demonstrative: *wi*=this, *wo*=that). Oblique case: *wa, wo,*

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we, wi. Plur. *won, wono, we.* Obl. case: *won, wo. awno* (or *ɣwono*, which again is a Southern Kurdish form).

(*b*) *Reflexive pronouns: kho*, Obl. c. *khwa.* In my notes I could not find any instance of its being joined with a pronominal suffix (cf. M., p. lxiii).

(*c*) *Interrogative pronouns.* These are *ke* and *che, chi, cha*= who and what. Apparently there is no exact equivalent for "which" (cf. M., p. lxiv,—*kām*).

(*d*) *Relative pronouns.* It is doubtful if they exist at all; in any case they are extremely rare. There are only a few examples of the use of relative *ke.* These, however, may be borrowed from Persian, or explained as the explicative conjunction (also Persian, often used pleonastically). The relative pronoun "which" (very rarely used), is *kizh.*

(*e*) *Indefinite pronouns* are the usual *kas* and *hich. Tishtak* =something, is a substantive.

3. VERB. The verb in Khorasani Kurdish on the whole deviates very little from the standards of the North-Western dialects in Kurdistan proper, if the general phonetical modifications only are taken into account. The peculiarity which may be noted consists in abundance of parallel forms. This most probably can be explained as the result of a synthetic origin of the dialect. In the speech of illiterate people the rules governing the use of tenses and of the parallel forms generally are exceedingly intricate and admit of no easy analysis. The speaker will use different forms in apparently quite identical sentences, or in the same sentence, if repeated. Especially difficult is it to form a definite idea regarding the exact meaning conveyed by different past tenses, with or without modal particles. Such comparatively rare forms, distinguished by grammarians as Pluperfect, Conditional, and Subjunctive are especially doubtful as to their real application.

(*a*) The *modal particles* are the usual *bi-, be-, bä-, b'-*, which conveys the sense of complete action, and *da-, do-, di-, de-, d'-*, which simply marks the indicative mood The latter, especially before the verbs beginning with a vowel, may become *t'-*. The particle *bi-* forms Imperative, Future, Conditional, and Perfect; in the verbs which have a prefix it is usually omitted: *beger*, but *halgir.* The particle *da-* forms the Indicative of the Present and Preterite. It is doubtful if it is ever used for the formation of the Future (cf. Sc., p. 279, § 171).

(*b*) The *verbal suffixes.* There are two parallel forms of the personal suffixes which may be used with the same verb, apparently without any considerable change in the meaning. The first is:—

Sing.	I p.	*-um, -em, -im, -am, - 'm.*
	II p.	*-e, -i.*
	III p.	*-a, -e.*

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Plur. I p. *-ini, -eni, - 'ni.*
II p. *-in, -en, - 'n.*
III p. *-in, -en, - 'n.*

The second type is: Sing. I p. *-ma, -ima;* II p. *-e, -i* (*-iya*); III p. *-a* (*ya*). Plur. All persons: *-na, -ena, -ina.*

Comparing these two types, it appears that they differ only by the addition of *-a, -ä.* Socin suggests no explanation (Sc., p. 280, § 173); Mann calls it "unerklärliches *ê*" (M., p. lxxviii, 67). Could it be identified with the determinative affix *-a* which is added to the nouns? Logically this seems the most probable, and the affix *-a*, as when added to nouns, may be often treated as a sign of logical emphasis, or "accent": *war kata shigore*=he *went* to hunt; *da geren geshtena wi kawro*= they wandered and (at last) *came* (after all) to those rocks (199).

Of other verbal suffixes the following may be noted: Participles end with *-i*, or *-iya* (apparently both, the Present and the Past, as there is probably not much differentiation between them). The suffix of the Infinitive, *-in*, is rare, and the form itself is rarely used. The Causativa are formed by the suffix *-in* or *-on* in the present stem, and *-on* or *-ond* in the Preterite. The suffix *-āwa* seems to be exceptionally rare in the Khorasani Kurdish. The only example which I have found in my collection of these Kurdish texts is rather doubtful: *bazhno derizh wa kashyowa*=the tall stature was appearing long (cf. M., p. (xxiii).

(*c*) The forms of the substantive verb. I. $\sqrt{ah}$:

Present tense. (1) Independent form: Sing. I, *ham* (with a stress *hama*); II, *hai;* III, *ha* (str. *haya*); Pl. I, *hani;* II, *han;* III, *han* (with a stress all three *hana*).

(2) Suffixal form: Sing. I, *-m, -im, -em, -um,* (str. *-ima, -ma*);[1] II, *-i;* III, *-a, -ä, -e,* (str. *-aya, -ya*); Pl. I, *-ni;* II, *-in, -en;* III, *-in, -en,* (str. all three persons *-ena, -na*).

(3) Negative form: Sing. I, *ninim;* II, *nini;* III, *nina* (*tunna*); Pl. I, *nini* or *ninin* (or *tunna*, for all three persons).

Imperative: *bi, wi, we,* or *bo.*

Optative: Sing. I, *bom;* II, *boi;* III, *bo;* Pl. *bon* (all three persons).

II. $\sqrt{bw}$ (to be and to become):

Present tense: Sing. I, *bem* (*wem*); II, *bi* (*wi*); III, *be, bie* (*we, wie, wiya*); Pl. I, *beni* (*bina*); II and III, *bin* (*bina*).

---

[1] Examples: *yore ta'ma*=I *am* thy friend; *kem kharji'ma*=I *am* poor; *az kuti'ma* =I *am* ugly, etc.

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Imperative : *wi*, *wu* (negative form *mawu*).
Preterite : Sing. I, *bum* (*buma*) ; II, *bui ;* III, *bu*, *wu* (str. *buya*); Pl. I, *buni ;* II and III, *bun*, (str. *buna*).
Perfect (?) : Sing. *hawum ;* II, *hawui ;* III, *hawu ;* Pl. *hawun*, for all three persons. (Another form, for all three persons of both numbers—*buya*.)
Participle : *bui*.

All these forms have chiefly the meaning of the corresponding tenses from the verb "to be," but also are used in the sense "to become." In the latter case there are parallel forms for the Present and the Future, with the modal particles *be-* and *da-*: *bewem*, *bewi*, etc., and *dawem*, *dawi*, etc. Perfect (or really Pluperfect ?) : *buwum*, *buwui*, *buwu*, *buwuni*, *buwun*, *buwun*.

(*d*) The conjugation of the Khorasani Kurdish verb is the same as in the Western Kurdish dialects. The same difference is made between the transitive and intransitive verbs, the former using the passive construction in the Preterite and Perfect tenses. The following are specimens of these :

I. Paradigm of an intransitive verb :

katin=to fall.
Imperative : *bekaw*, Pl. *bekawen*.
Present : *dakawem*, *dakawi*, *dakawà*, *dakaweni*, *dakawen*, *dakawen*.
Future (and Conditional) : *bekawem*, *bekawi*, etc.
Preterite : *dakátem*, *dakáti*, *dakát*, *dakátini*, *dakátin*, *dakátin*,—or : *kátima* (*kátma*), *kátiya*, *káta*, *kátena* (*kátna*, all three persons). (This form conveys more the sense of a completed action).
Perfect : *katiya*, both numbers, all persons.
Pluperfect : *kati bu* (?).
Participles : Present—*kawi* (?), Past—*katiya*.

Note.—Some verbs, especially those beginning with a vowel, have their modal particle in the form of *t-*, cf. *tem*, *tei*, *te*, *teni*, *ten*, *ten*, from *hotin*, to come, the stem of the Present being *e*. With the affix *-a* this form becomes *tema*, *teya*, *tea*, etc.

II. Paradigm of a transitive verb :

kerin, to make, to do.
Imperative : *beke*, Pl. *beken*.
Present : *dakem* (*dekem*), *dakei*, *dake*, *dakeni*, *daken*, *daken*.
Future and Conditional : *bekem*, *beki*, *beke*, etc.
Preterite : I, *ma ker* ; II, *ta ker* ; III, *wo ker* ; Pl. I, *mo ker* ; II, *hawa ker* ; III, *awono ker*.
Perfect : *ma keriya*, *ta keriya*, etc.

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Pluperfect : *ma keri bu* (?), etc.
Past Participle : *keri, keriya.*

The verbs with the suffix of the Causativa, *-in, -on* in the Present, *-ond* in the Preterite, are conjugated in the same way as the usual transitive verbs. In my notes there are apparently no examples of the use of the Passive. Those with the suffixes *-rem* and *-ra* (cf. M., pp. xcv–xcviii) probably are not used in the Khorasani Kurdish.

(*e*) There are verbs which may deserve being called irregular on account of some peculiar phonetical changes, like *ḥarrin* (=*hal-rawin* ?) : Imperat.—*ḥarra* (*warra*) ; Present : *tarem, tari, tara*, etc., or *ḥarma, ḥarri, ḥarra, ḥanni* (sic), *ḥarna, ḥarna.* The Preterite, etc., are formed from the verb *chuin*, to go. Other verbs may be called "defective," like *konin*, to be able, which is apparently used impersonally : *dakon*=can, *nokon*=cannot ; *nokon bekem*=I cannot do (it).

(*f*) Prefixes altering the meaning of the verbs are : *hal, har, war, wa*, all approximately corresponding with P. *bar* ; *dar, dä*=P. *dar* ; *wa*=P. *wā*. Those which have no corresponding equivalents in Persian are : *li, do, ru, ro*, approximately meaning "down" : *ro-kawem, do-kawem*=I fall down, lie down. Usually, as mentioned above, these prefixes cancel the modal particle *bi-*, but not *da-*, which takes its usual place, immediately before the verb : *ro-da-kawem, hal-da-girim.*

(*g*) The negative particle *na* (*ne, no, ni*) immediately precedes the verb and often draws the accent upon itself : *ro-nó-kawem.* It is difficult to find what are the rules concerning its influence on the particles *bi-* and *da-*. Apparently it more frequently necessitates dropping both than does not affect them.

4. INDECLINABILIA. (*a*) *Adverbs.* Amongst the adverbs there are many which are used almost in the sense of prepositions, cf. *tu*=there, in ; *noti*=like, similar to (? it seems to be a Participle, perhaps like P. *mānand*), e.g. *noti mion da-kolä*=bleats like ewes. Many adverbs are the same as in the dialects of Kurdistan proper, only slightly altered by phonetical influences. Apparently quite idiomatic are the composite adverbs such as *kudho*=where ; *widho*=here ; *tidho*=there ; etc., instead of the simple ones *ku, we, tu.* Also *zhawro, lawro*=from there, etc. The Western adverb *hinda*=so much, on the other hand, here is pronounced as *hin*, e.g., *hin handakä*=so much is still little.

(*b*) *Prepositions.* These are the same as in the dialects of Kurdistan proper : *la, zha* (*zhä, zhe, zhi, ya, ye*),[1] *dä, dar, wa,*

[1] This monosyllabic preposition, and others of the same type, apparently never, or very rarely, have their vowel shortened so much as to make it inaudible : *zh'-, l'-, d'-*, etc., as it has place in many dialects of Kurdistan proper.

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war, *lawar*, *wo* (=P. *bā*), *wi* (=P. *bī*), *sar*, *lasar*, *ben*, *zhaben*, *now*, *lanow*, *zhanow*, *zhwir* (=P. *zīr*), *päy*, *jam* (=Ar.-P. *jānib-i-*, meaning: with, by side), *urte* (amidst, between, or adjective "middle"), *sawo* (for, for the sake of). The prepositions *la* and *wa* are almost identical in their use; *zha*, besides its principal meaning "from," is also similar to the preceding two: *zha wi* means not only "from him," but also "of him"="his," and "for him," or "to him."

Apparently a great many prepositions which are still used in Kurdistan proper, have been forgotten here, such as *lagal*, *lala*, *nik*, *bui*, *buo*, *ling*, *dang*, etc.

Sometimes Persian or Arabic prepositions are used in the language of the uneducated in peculiar combinations, e.g., *ghayrazwa*=except for.

Many of these prepositions require the addition of the affix *-do*, *-dho* after the noun which they govern, or the definite affix *-a*, *-e*, *-i*, or both: *la now khalke; lawar dere; jam de-do*; *da qwin-do*; etc. Those which originally are names may, or may not, require the *iḍāfat*: *sar ma* and *sare ma; ben madho* and *beni molon*; *war ma* and *ware ma*, etc.

It may be noted that the preposition *wa* is very often used for constructing a nominal proposition: *beni Bome wa kuleshka* =below Bām there are harvested fields; *la sar yore wa lanje ma*=I am fighting for the beloved; *tu wa buk we az wa zowo*= thou be the bride, I—the bridegroom, etc.

(*c*) *Conjunctions.* The Kurds of Khorasan, being a primitive pastoral people, cannot be expected to use in their conversation highly developed periods. But the scarcity of conjunctions which one sees here is really singular. They are systematically avoided, even the most important, such as "and" (rarely used, pronounced *-u*, *-e*, *-i*, and difficult to distinguish from the *iḍāfat*): *bozki pile ma*=my arms and shoulders. The conjunction *-zhe*="and," "also," often refers not to a single word, but to the sentence: *Madkulibek kawow da-khor Murdormuy-zhe da-khor*=M. has eaten his meat, and Murdarmuy (also) has eaten his. The same omission is common in the case of "or," "if," etc., cf. *rinda kuti chal tumon a*=good *or* bad, 40 tumans (each).

III. Specimens.

1. FRAGMENTS OF EPIC SONGS.

The lament of Awaz Khan's sister.

1. *Serdorun beraf bun maslahat keren;*
la nole Aqdoshlį khįre shar keren;
zha kore qazo se haspe peh keren.
no merode per armona armone beru Awazu.
I sarḍorek noti Awaz zha ku binum;

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sawo yore Kushkhone-ro beshinum;
har che oni sar por halinem.
no merode armone armone beru Awazu.
Sardore la khwa ker pushtow haloni;
lenge khwa la zangu-do doni;
lu Awaze beru Awaze bakhte ta noni.
no merode armone armone beru Awazu.
Haspe khwa ber dä ulange;
täkyo keriye bugwande;
gullä likat la bizhonge.
no merode armone armone beru Awazu.

Translation.

The sardārs came together to have a consultation,
in the gorge of Āqdāshlī they took auguries.
In anger and irritation (because the auguries were not propitious), they broke the legs of three horses.
O unhappiness, o sorrow, o sorrow, o my brother Awāz!
Where will I see a sardār like Awāz?
To-morrow I will send a friend to Qūshkhāna,
I will take all that he will bring as (his) share.
O unhappiness, o sorrow, o sorrow, o my brother Awāz!
He put a coat on, took his pistol,
put his foot into the stirrup.
Oh Awāz, brother Awāz, luck was not with thee!
O unhappy, o sorrow, o sorrow, o my brother Awāz!
He left his horse on the lawn,
and stretched himself on a rug,
(because) the bullet struck him through the eyelashes.
O unhappiness, o sorrow, o sorrow, o my brother Awāz!

Death of Jaju Khan.

2. *Haspe Jaju hin joni-y-a;*
khurjini wi Turkmoni-y-a;
khawar hot nomerod chuya.
Jaju wa khwa la gawe-dho;
gulä likat li dowe-dho;
khŭin chuya sare chakme-dho.
Wa khurjinä wa khurjinä;
chakmä keshon zha now khŭinä
dasmol dona sar berinä.
Jaju wa kuno chiyona;
buya [sharqa] sharqa panjtirona;
nowe beroy Musa khon-a.
Haspe Jaju malworiy-a;
gulä likat wikori-y-a;
khawar hota ke meriya.

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Haspe Jaju Khan kechik-a ;
nole mikhon chika chika ;
zhene Jaju moya kachika.

Translation.

The horse of Jāju Khān is so young,
the saddle is of Turkoman make ;
news came that a calamity befell him.
Jāju was alone in a gorge,
(when) a bullet struck him in the lappet.
Blood began to pour over his riding boot.
(From) the saddle, (from) the saddle,
they take off the boot covered with blood,
they tie his wound with a kerchief.
Jāju (is taken to) a cave in the hills,
the rifle fire continued.
The name of his brother is Mūsā Khān.
Jāju Khān's horse is pearl coloured.
A stray bullet struck him,
news arrived that he was dead.
The horse of Jāju Khān is of small size,
his shoes and nails clink (as he walks).
Jāju's wife is (still) young.

Death of Qahramān Khān.

3. *Karamon Khon mol moniye ;*
tufang liken (wa) kholiy-ä ;
gullä like ley poliye.
Karamon Khon mun dä mol-dho ;
gullä likat biyon-dho ;[1]
nisfe shaw be[2] *jwon do.*[3]

Qahramān Khān remained in his tent.
The fusillade began ; (his own) rifle was not loaded.
the bullet hit him in his side.
Qahramān Khān was staying in his tent.
A bullet hit him through the eyelashes (?) ;
as midnight arrived, he expired.

---

[1] Apparently a preposition is omitted before "*biyon-dho.*" The latter is the same as *bizhong*, according to the explanations the man gave me who dictated this song.

[2] Apparently for *bu.*

[3] Two syllables are omitted.

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II. POPULAR LYRIC SONGS.

4. *Zha ben ma-dho Kushkhona-y-a;*
sisa buza chorshona-y-a;
khole riyo nishona-y-a.
Below me there is (the district of) Qūsh-khāna.[1]
A fair, pleasant, stout one,
her sign is a mole on her face.

5. *Chowe rashin koni koni;*
chordah molon la sar doni;
chowe rashen kel halnoni.
Black eyes, like two springs!
Fourteen tents are pitched there above.
(Her) black eyes (are so dark that they) do not need antimony.

6. *Chara bekem ziwiston-a;*
barfä like dä restona;
nowe yore Guliston-a.
What can I do,—it is winter now,
snow falls on the ropes (of the tent).
The name of (my) wife is Gulistān.

7. *Chyoye sar ma pällä pällä;*
kachik tarin ǵällä ǵällä;
ma halgirt kachko mälla.
The hills above me are like a staircase.
The girls pass near in crowds.
I married a clever girl.

8. *Zha ben ma dho konyo kaske;*
oni war mä nonu maske;
chowen biyer mamon ǵas ke.
Below me there is a green (spot near a) spring.
Thou bringest me bread and butter.
"Take (even) my eyes, bite my breast."

9. *Bar rä ḥarra gulchin gulchin;*
sisa buza wa kamarchin;
oho tare kawo wa chin.
She walks along the road, looking like a flower,
fair, fresh, in her short frock.
Oh! Thou art walking (like a) speckled partridge!

10. *Kullä murä kullä murä;*
showe yore riye tu rä;
dukmä du ri kur wa kur-ä.
Thou, in a coat with tight sleeves![2]
I am (thy) lover by night, and walk away by day.
Buttons, row by row, are on both sides of the coat.

---

[1] Near the frontier, North of Bujnurd.
[2] So explained; perhaps *mura* is *muhrā* (P.) i. e., of printed calico?

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11. *Zha we hole ware beron;*
ta wa hiw be az wa cherow;
bo bemere bowe beron.
Get up from there, and come near me.
Be thou as a moon, and I will be like a candle.
May (thy) father and brothers die!

12. *La sar dore la sar dore;*
bo litekhe la sholwore;
qiz dakane de da kor-ä.
Up on the tree, up on the tree!
The wind raises (her) skirt,—
the daughter is smiling, but the mother is angry.

13. *Wa qurbone mole bowe;*
kuza lone tarre owe;
owe none khire bowe.
By (her) father's house!
(She) is carrying a jug, and going to bring water;
(but she) does not bring water for her father.

14. *Bar rä harre az bif kerem;*
akhtulot ke gudho girem;
ta nawinem az damerem.
As thou hast walked along the road I watched thee;
talk, I will listen to thee.
(If) I cannot see thee, I shall die.

15. *Chara bekem yor kachike;*
akhtalotey [1] *nekoy beke;*
de bemere hin handek-ä.
What can I do, beloved girl?
Thou canst not (even) say anything,—
(if thy) mother die, it is not sufficient either.

16. *Alo boron Khwodhe boron;*
bewore la zewinhoron; [2]
Khwale doye kachikdoron.
The rain, O God, the rain!
Let it rain upon the fields!
May God punish the men who have daughters! [3]

17. *Chowe rashin chow chuchiko;*
dukmä likhis la huchiko;
dilem ber won kachiko.
(Those girls with) black eyes, like the eyes of a lark,—
buttons are sewn on (their) sleeves,—
those girls have stolen my heart.

---

[1] Variant *akhtulotak.*

[2] *Sic,* probably for *zamin-ho-ro,* with nasalisation for the sake of the rhyme.

[3] I.e.—and require for them large bride-prices.

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18. *Chowe rashin chowe teron ;*[1]
beroi kachik benow meron ;
keros halda zha sar beron.
(With) black eyes, like the eyes of a falcon !
The brothers of the girl are with men,
open the shirt on thy breasts !

19. *Imom-zode la kawire ;*
ow bar dona sar khawire :
zha kachike hota bire.
A shrine of an Imam is on the salt plain.
They directed water towards the fields.
A reminiscence of that girl came to my mind.

20. *Azĕ tema ya Shuruti ;*
dawo borin zha boruti ;
haldagirem khwaṇgi tu te.
I am coming from Shāhrūd,
the camels carry (loads of) gunpowder.
I will marry the sister of (the man who) is coming there.

21. *Kulä chite kulä chite ;*
la biriye paz dudite ;
kare ma di shir darite.
(Thou in) a calico jacket, a calico jacket !
Thou art milking the cattle in the enclosure,
when thou noticed my shadow, thou spilt the milk.

22. *Dawadoron dawadoron ;*
bori dawo siwe noron ;
yeke bedha yodegore.
Camelmen, camelmen !
(Your) camels are carrying loads of apples and pomegranates,
give me one as a present !

23. *Lu shewone paze ke-a ;*
bedhey niri be rä bea ;
daṇgi yore tidho tea.
Hey shepherd, whose sheep are these ?
Let the leading he-goat go by the road,
the voice of (my) beloved comes from there.

24. *Zha ben ma dho mole ke-na ;*
du dalolen daw dakena ;
ḥarra pĭrs kä qĭze ke-na.
Whose tents are those below me ?
Two pretty girls are making "dūgh,"
go, ask (them), whose daughters they are ?

---

[1] T. *tarlān.*

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25. *Chowe rashin chowe bere ;*
rash dakaren la now tere ;
sholun doyke ta wemere.
Black eyes, eyes and eyebrows,
are seen among the vine-shots.
If God please, may thy mother die !

26. *Dukme yakhi ta du duna ;*
dasto' wejem wa no wona ;
kawne ġawre yoru men-a.
The buttons of thy collar are but two.
I put my hands (round thy neck), let them not become unclasped,
(she with) a white headkerchief, she is my beloved.

27. *Zha ben ma-dho sole lena ;*
har yonake du khol lena ;
aw kholone alef bi-na.
Below me the torrents rush along.
Both (her) cheeks have two moles,
these moles are like "alif" and "be."

28. *Guli peri gulyun bar da ;*
zha wi bowi khoy nomarda ;
bekawi wa min cha darda.
(Thou with) thick tresses, let the tresses loose ![1]
Her father is a scoundrel,
what a misfortune is befalling me !

29. *Shoristone boghistone ;*
ow la boghon gere dona ;
Alme ker me (wa) diwona.
The town, the gardens,
the water pours into the orchards.
Alma made me mad.

30. *Azhĭ tima zha we shera ;*
bowe girä haspe nera ;
khawar hot ta dona mera.
I return from the town ;
the father saddles a strong horse ;
the news have come that they are giving thee in marriage.

31. *Zha kulute süir dokatem ;*
ġa runishtem ġa rokatem ;
zha yore khwa kor-do katem.
I walked down from the red hills,
sometimes sitting, and sometimes lying down.
I have become angry with my sweetheart.

---

[1] I.e., let thee become a widow.

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32. *Chiyoi sar ma wa markh-a ;*
bilak shigor dhoya war kha ;
dast haley la Khwaḷe sar kha.
The hills above me are covered with marh-grass,
much game is roaming loose.
Raise hands to God, above thy head.

33. *Azĕ tema zha Turwati ;*
luke kamar da pishye ṭi ;
zinge zinge zange zard.
I am coming from Turbat,
the black camel is walking at the head of the caravan.
Boom-boom, the yellow bells are booming.

34. *Wa kulie wa tashie ;*
dä benow ziw-dho dachuye ;
ta odam shonde du mine.
With the wool and the hand spindle
he walks along the gorge:
(is it) the man (whom) thou hast sent after me?

35. *Chowe rashin surmä makä ;*
me wu mara [1] *qamza maka ;*
johilie tu gap maka.
Do not put antimony on thy black eyes,
do not come to me, do not jilt me.
I was foolish,[2] do not talk (like this)!

36. *Allo awre Khwadhe awre ;*
kawni sare ta ǵawr-ä ;
wa ta sitäm wa me jawr-ä.
Oh, clouds! God! Clouds!
(Like) the kerchief on thy head (they are) white.[3]
It was cruel towards thee, and an offence to me.

37. *Eho taren kuloy qizin ;*
rang dä rie won dalizen ;
johil tunna päy belizen.
Oh, all girls are walking (away);
beauty is shining (in vain) on their countenances:
there are no lads to play with.

38. *Doroy ikde gul keriya ;*
chowe rashin kel keriya ;
madhoy mä hosil keriya.
The sanjat trees have begun to blossom.
The dark eyes were blackened with antimony,—
the desire of my heart has been fulfilled.

---

[1] *Sic.* [2] *Or* "nonsense!"
[3] White is the colour of mourning. This line in the original is one syllable short.

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39. *Zha ewordo te dange ma ;*
zalil buya wo range ma ;
kas halnoni wo honge ma
Since evening my groans are heard,
the colour of my face has faded.
Nobody paid attention to that my cry.

40. *Bar rä harra(m) zori zori ;*
zha dele ma khwin dabore ;
la ta kat gullä nokore.
I am walking along the road in tears,
blood is dropping from my heart :
a stray bullet has hit thee.

41. *Wa qusa-ma wa qusa-ma ;*[1]
zha ghusa won ronokawa ;
showo khow la chow nokawa.
I feel so sad, I feel so sad,—
I cannot sleep for sorrow about her (or him),
at night sleep never comes to my eyes.

42. *Rie chuya owo owo ;*
tu wa buk wu az wa zowo ;
mo har diyon now kulowo.
(When) the sun is more and more sinking towards the West,
(let) thou be as the bride and I as the bridegroom,
both of us wrapped up in one felt cloak.

43. *Du kachike khwange hawen ;*
zha arke-do dodakawen ;
bale kachik la ger kawen.
Two maidens who are sisters,
are descending the stairs from the house,
may the misfortunes of the younger one fall upon the elder !

44. *Imamzodä Imamzodä ;*
dashtewone dode dode ;
kore rad[2] *buy foida nodha.*
Near the shrine of the saint, near the shrine,
the guard of the crops is wailing.
(But) the anger at what has already happened is of no use.

45. *La sar bandi la sar bandi ;*
haryo sisa la sar zandi ;
dile ma bir ta kashangi.
O thou, with a tie on thy head, a tie on thy head !
with white wool on thy arm,
thou hast stolen my heart, o pretty one !

---

[1] Ar. *ghussa.* [2] Ar. *radd.*

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46. *Ya Khirowo to Neqowe ;*
to wo rä chala hasor-ä ;
kachke katna la qatore.
Between Khayrābād and Nuqāb,
along the road, there are forty hamlets.
The girls are in a line.

47. *Belak päri hod rata ;*[1]
hanyo yeki wa khol-a ;
ma ta'rif ker wa ghaywona.
Many peri-like girls came and are gone.
On the forehead of one of them is a mole,
I met (?) her in a solitary place.

48. *Bazhne yore zarowi-ä ;*[2]
la wi milko päydo wie ;
mine ta ker dohwie.
The stature of (my) beloved is graceful.
In this place I am a stranger,
I quarrelled with thee.

49. *Az wa tane az wa tane ;*[3]
la kurdiko bär wa Sanem ;
ware sote hor boweni.
I am alone, I am alone,
I am in the camp, near to Sanam.
Come for a while, let us sit near a fire.

50. *Az dakhozem ta dakhoze ;*
dewe bowe ta nosozen ;
kaylin zha me per dakhozen.
I wish (it), thou (also) wishest (it).
Thy mother and father do not agree,
they want a large bride-price from me.

51. *La sar pere la sar pere ;*
dashäwtiyo notow chere ;
owoz chuya Nishopire.
(I am) on the bridge, on the bridge.
(Something) burns like a lamp.
Rumours reached Nīshāpūr.

52. *Zha we hole ware wäro ;*
ta wa hiw we az wa chero ;
bo beshawte mole beron.
Run away from there, come (this) side.
Be thou as the moon, and let me be as a candle.
Let the house of thy brothers be burnt![4]

---

[1] *Hot radd-a.*
[2] Variant : *bozni daste ta owi-ä*=the bracelets of thy wrist are blue.
[3] I.e., *watanem*,—*m* is inaudible.
[4] See almost exactly the same tristich in No. 11.

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53. *Sio-khona Sio-khona ;*
siyoh zulfon dona dona ;
buma khola la riyona.
Siyāh-knāna, Siyāh-khāna !
The black-locked (maidens) are scattered (on the plain),
like moles on a face.

54. *Chite sare ta gulkhur-ä ;*
riyo mine biya du rä ;
ta zha mä keriya kore.
The calico (of the kerchief) on thy head is painted with flowers.
The road before me has divided in two roads,
thou hast become angry with me.

55. *Zha chiona to julghona ;*
la mä berri du riona ;
yeke nodha wa diona.[1]
From the hills to the plains ?
Both roads are forbidden to me,
one girl cannot be married to two husbands.

56. *Shalwor la ta khos*[2] *kadhak-ä ;*
dawar ma-dho qadam makä ;
johili-em tu ǵap makä.
(Thou with) the skirt of fine woollen stuff,
do not approach one step (towards me).
" I am foolish, do not talk (like this)."

57. *Wa ben ya chion dakaton ;*
kawo helinun dakaton ;
qiz polie dion katen.
They walk down the hill
(like) partridges running to (their) nests,—
so maidens hurry to (their) mothers.

58. *Showa ka ya showe bhore ;*
ṭizha morak wa sị yore ;
me tir nakhor ya didore.
The night has fallen, a night of spring ;
(I slip away like) a thin snake towards my beloved.
I cannot look enough at her.

59. *Showo rasha kata sar ma ;*
bozke pile katna war ma ;
yore kachik hota sar ma.
The black night fell upon me ;
my arms and shoulders moved with a start,—
the little beloved came near me.

---

[1] Plur. from *du*, with the determinative suffix.
[2] Ar. *khāṣṣ* ?

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60. *Chyoi sare ma wa biyä ;*
shokhon la sar kerya siye ;
shuni kuti kariwi-y-ä.[1]
Hills above me are covered with willow trees,
(their) branches make a shade over my head,—
a bad place is a strange land !

61. *Suwe rịndo suwe rịndo ;*
orek dodha tu dä qŭin-do ;
ustu khor-ä dil be shun-do.
A fine morning, a fine morning,
a fire is burning there in the tent.
(My) head becomes bent, the heart has stopped.

62. *Molo doni wa gawe-dho ;*
yore rindo wa khawe-dho ;
khole riye dä jam de-dho.
Tents have been transferred down to the valley ;
The beautiful beloved one is asleep,
the mole of (her) face is next (her) mother.

63. *Dä war ma-dho tara owa ;*
dona dona pun la now-a ;
nishone bäzhnä zärow-a.
The water is flowing towards me,
(the bushes of) mint grass (grow) near it,
(resembling) the graceful stature.

64. *Chowe rashin chowe moron ;*
rüie süire dune noron ;
dạnge ta te now jinoron.
(Thou) with black eyes, like the eyes of a snake,
(with) red face like a pomegranate,
thy voice is audible to the neighbours.

65. *Sisa buza noti mion ;*
kola kola te dạngi won ;
guron khore chow la chion.
Pale, fair, like ewes,
(their) voices are heard like the bleating.
Let (them) be eaten by wolves,—(their) eyes are fixed on the hills !

66. *Sisa buza noti hekä ;*
hota mole ma elagä ;
sare ma nake kelagä.
Pale, fair like lime,
she came to my tent to take a sieve.
Do not make my head giddy !

---

[1] P.-Ar. *gharībī.*

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67. *Dä here-dho dä here-dho ;*
chal tumona dä sere-dho ;
khwa dakuzhem la dere-dho.
On the hills, on the hills,
forty tumans on (her) head ![1]
I will kill myself at the door.

68. *Däri kala wa hafshon-a ;*
haldagirem wa dastona ;
nowe yore Guliston-a.
At the entrance to the village there is thorny grass,
I pluck it with (my) hands,—
the name of (my) beloved is Gulistān.

69. *Hawo ǵarm-ä hawo ǵarm-ä ;*
ta bit orde narmä ;[2]
molo bor ke hota sar mä.
It is hot, it is hot,
thou hast kneaded soft flour :
some tents have moved and come towards me.

70. *Dawo ǵawre nurboron-a ;*
sisa buza zha bagon-a ;
chowe rash wa kalam dona.
White camels with shining wool.
Pale, fair, belonging to a noble family—
(her) black eyes (are as if) painted by a qalam.

71. *War katio hiwo yozda ;*
kawne sis sar hanče buz-do ;
wo deli ma bu parwoz da.
The moon of the eleventh night came up,—
a white kerchief is above (her) pale forehead.
Oh, my heart feels as if it is going to fly away !

72. *Sar wa shoi sar wa shoi ;*
tu war maka bär wa boi ;
hiwa rüina tu[3] *khiyoyi.*
(O thou with) coins on the head, coins (*shāhīs*) on the head !
Do not come out in the open,—
the moon is shining, thou wilt be suspected.

73. *Ware mole ma jor-jore ;*
wa daskirte chow la yore ;
gudho meyer la jinore.
Come in more often to my tent !
—Thou hast a bride, but courting others.
—Do not listen to the (gossip of) the neighbours.

---

[1] Hanging as head ornaments of a rich girl.
[2] Two syllables are lost. Probably the word "*orde*" must be repeated twice.
[3] In both cases *tu* is here a preposition, not pronoun.

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74. *Zha ben ma-dho takhte pon-a ;*
süir dakare zha gulona ;
yore rinda la molon-a.
Below me there is a level plain
(which) looks red on account of flowers.
A nice girl is near the tents.

75. *Zhabey la ta soj kajin-a ;*
pinä la sar kharijin-a ;
hawole ta zawejin a.
Thy overcoat is of the best sort of silk,[1]
patches cannot cleave to it.
Thy kinsmen are married.

76. *Käros mini käros mini ;*
dawo zha julgä tini ;
mone[2] *dawon ma buini.*
(Thou) with a blue shirt, a blue shirt!
Thou art driving up camels from the plains.
The camels are (only) an execuse to see me.

77. *Azi la ta pir wa dilem ;*
chuke beshin bekhamulim ;
zhi gule ta az cheterim.
My heart is full of thee;
send me a coat so that I dress nicely.
I look prettier than thy husband.

78. *Belo kachke tui masti ;*
har chi dakem nei dasti ;
nazar[3] *kerda Khwadhe khost-i.*
O girl, thou art mad,
whatever I do thou dost not come on my hands.
(Art thou) given to God, consecrated to Him?

79. *Kulley la ta busta niw-a ;*
olyek rüi-ä olyek hiw-a ;
zha ashke ma nokhor shiwa.
Thy frock is a span and a half long.
One of thy cheeks is like the sun, and the other like the moon,
I could not eat my supper out of love for thee.

80. *Az chuchike wa panja'ma ;*
la sar dore wa gowja'ma ;
la sar yore wa lanja'ma.
I am like a sparrow with claws,
sitting on a tree of white plums,—
I am fighting about my beloved.

---

[1] This is said ironically.
[2] Ar. *ma'nī.*
[3] Ar. *nadhar.*

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81. *Bäzhni dirizh az da ku kom ;*
zhelon doine az da ji kom ;
pile roste wa bolgiw kom.
Where to hide (my) tall stature ?
Spread blankets, I will lie down,
(my) right shoulder I will rest on a cushion.

82. *Dil kawirin dil kawirin ;*
nokon nowe ta begirim ;
sawo taro az awdolum.
O thou, stone-hearted, stone-hearted one !
I cannot find a name for thee,
for the sake of thee I roam like a darwish.

83. *Du kachike sakon kus ker ;*
keros deryoy mamon bus ker ;
la war lowkon altimos ker.
Two girls were attacked by dogs,
their frocks were torn, so that their breasts could be seen.
They appealed (for help) to the lads.

84. *Dumon ruzhyo now molona ;*
kachik rawen wo sulona ;
lowke dona wa kulona.
The fog spreads between the tents,
the maidens run in their shoes,
giving (playfully) blows with their fists to the lads.

85. *Lo kajakon che keriya ;*
iri-wiri[1] *daf keriya ;*
ranje deli ma beriya.
Oh, she arranged her locks nicely,
looked this and that way,—
she took away the sorrow from my heart.

86. *Iru nowa wa dawon-a ;*
sarwonon zha takhte pon-a ;
kalne yore sad tumon-a.
To-day it is my turn to go with the camels,—
the camelmen are returning from the plains.
The bride-price of (my) beloved is a hundred tumans.

87. *Mole bowe ta la wi wä ;*[2]
dukoneke ta wo bewe ;
sar kori ta wa Khwadhi we.
The house of thy father is on that side.
Let thy shop be looted,—
the end of thy affairs be with God !

---

[1] P. *în rū ān rū.* [2] *War=bar*

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88 *Chowe rashin chowe moron ;*
yor dekshina sare neron ;
gudho nodha la we meron.
(With) black eyes, like the eyes of the snakes,
(my) beloved drives camels,
he disobeys those men.

89. *Wono kulle darde tenna* (sic) ;
la now khalke ǵap ta kanna ;[1]
iri suwa ta dawana.[2]
All these sufferings are caused by thee.
There is gossip amongst the people,—
this morning they will give thee away (in marriage).

90. *Wo shawona chara shawe ;*
yor wa tane ronokawe ;
khaw la chowe ma nokawe.
Those nights, how many of them!
The beloved cannot sleep in solitude,
(and) sleep never falls upon my eyes.

91. *Be chukh karu be chukh kare ;*
zhe julghe te chi khaware ;
barkhe karu shiwe saru.[3]
Ey thou, in a black cloak, in a black cloak!
what is the news in thy valley?
—A black lamb is prepared for supper!

92. *Bozor mishten bozor mishten ;*
Qajar hotun runonishten ;
khonu bage mo wekushten.
The bazars are as if swept (so empty).
The Persian troops came (and even) did not sit down (to rest),—
they killed our khans and begs.

93. *Aze tema zha Morise ;*
kawek jeri buma sise ;
wo kalinke Fotma Nisä.
I am walking from Moris.[4]
A partridge flew up, I become pale,—
I am carrying the bride-price of Fāṭima-i-Nisā.

94. *Pazi bowe ta wa pir-a ;*
zhe here-dho gurra-gurra ;
kullä yore mistak durr-a.

---

[1] For *katna.*
[2] For *dadana* ?
[3] My informer observed: *bad gufta!—Saru* probably is *sar bu*=was beheaded.
[4] Moris is a village about 40 miles distant from Nishapur. It is the centre of the Amarlu tribe who are notorious for their depredations.

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Thy father has plenty of cattle.
They make a clatter like roar descending from the hills.
The frock of my beloved is like a handful of jewels.

95. *Owe chion khulla-khulla ;*
zilfe riye buma lula ;
kori ashke per wa tul-a.[1]
The water is flowing from the hills with a roar.
The locks of my beloved are like spirals.
Love affairs are a lengthy matter.

96. *Gul wä rä-dho gul wä rä-dho ;*
hilu mikhak la jiwe-dho ;
wa mä nadho bere de-dho.
O thou, like a flower on the road, like flower on the road!
In thy pocket thou hast cloves and cardamom seed.
Thou dost not give them to me, but carriest (them) to (thy) mother.

97. *Beni molon we kalghar-a ;*
dawon bekshin wa langara ;
nowi yore Khom Palwar-a.
Below the tents there is a growth of *saksaul* bushes.
Drive camels slowly,—
the name of my beloved is Khān Palwār.

98. *Zhe ma hodho kawre kun-a ;*
belak maror keshie bina ;
sar wa qaron yore min-a.
Below me there is a creviced rock.
(Many girls as so) many stags walked down.
That one, with coins (hanging) on her head, is my beloved.

99. *Beni Bome wa kuleshk-ä ;*
nere moyon fish kä fish kä ;
meri du zhen kaylun-kesh-a.
Below Bām there are harvested fields.
Male and female camels are (grazing and) sniffing.
A man who has two wives often smokes *qalyān.*[2]

100. *Du gul hote zhe asmin-dho ;*
zhe won gulon yeke bin do ;
ustu khor-a del beshin-dho.
Two flowers came from the sky,
one of them is full of aroma ;
(my) head bent down and the heart stopped.

---

[1] *Ar. ṭūl.*
[2] Because he is always worried by many unpleasant thoughts.

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101. *Hiwo chand-a hiwo chand-a ;*
dowre hiwe halka band-a ;
fah shirin-a zawun qand-a.
What moon is there to-night, what moon is there to-night ?
Clouds have covered the moon.
(Her) mouth is sweet, her tongue is like sugar.

102 *Zowe mazen zowe mazen ;*
du pesmone chun bewozen ;
har ki rad ker[1] *mezdi*[2] *az-em.*
The gorge of the elders, the gorge of the elders.
Two of (my) cousins went to compete (in racing),—
I am the prize whoever wins.

103. *Bazhno derizh shef keshyo-y-a ;*
keros la nowe pichyo-y-a ;
bakhte märä wa duo-y-a.
(My) tall stature has become like a pole,
my shirt is tied at the waist.
the good luck of a man is to be prayed for.

104. *Azï tema zha won duron ;*
barkhe bowe buma bäron ;
rowisonä yek wa karon.
I am returning from those remote places ;
(my) father's lambs have become (full-grown) sheep.
Each kiss (of hers) is worth a silver coin.

105. *Le kachike hodho madho ;*
ta che baley khwa wa ma-dho ;
bor ka hanni zha we kalon.
O girl, here or nowhere ?
What a misfortune thou thyself hast brought me !
Let us load up and go away from these villages.

106. *Owä tara sar wä shiwa ;*
julge mone buya Khiwa ;
meron bewin zhenon pey dha.
The water pours down the slope
Khiwa has become the place in which I live.
See (those) men, and add to them the women !

107. *Pishyo kuche Melon dar bu ;*
pochä süirak bolo sar bu ;
aqle hushye min la sar bu.
There ahead the Melanlu tribe moved on,
a red skirt was seen high up (on a camel).
My reason and conscience were on the point of being lost.

---

[1] *Radd kerin*—to pass. [2] Probably P. *muzd.*

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108. *Ziwar busa mole tare ;*
rash dakare chowe bere ;
Khwadhey la me chi dakere.
The pale (faced) Zīwar walks towards the tents ;
(her) eyes and eyebrows appear (so) black (on her face).
O God, what has she done to me !

109. *Molon doni wa Taydil-do ;*
borish bori doron gul do ;
bäre kachkon käros eldo.[1]
The tents are transferred to Taydil ;
it is raining, the trees are in blossom ;
the breasts of the girls lift up their frocks.

110. *Mole bowe wa mayona ;*
wa sar-burd-a[2] *bor do dona ;*
iru nuwo wa dawona.
There are female camels near the tent of (my) father.
They have just arrived, the loads are being unburdened.
To-day it is my turn to go with them.

111. *Le Cherie le Cherie ;*
kurki lengon jurowi-ä ;
doike nine domori-ä.
In Cheri, in Cheri ;
the woolen socks on (her) feet are (like) stockings.
(She) has no mother, but a step-mother.

112. *Har chi ma gu ta halnoni ;*
la we däro dur wa koni ;
ware moli ma miwoni.
Whatever I say, thou dost not listen ;
In this gorge it is a long way to a brook.
Come as a guest to my tent.

113. *Dil wä dordo dil wä dordo ;*
chara dile narme bor do ;
zhe win herdo am ṭäror do.
Sorrow in (my) heart, sorrow in (my) heart !
How much has burdened the delicate heart !
We fled from that land.

114. *Iru bozoro rin' dona ;*
chowe bere hekil[3] *dona ;*
aw kachiko bedil dona.
To day the streets are decorated.
(Her) eyes and eyebrows are painted with antimony,—
That girl has been given (in marriage) against her will.

[1] *Haldo.* [2] *Sar-burd* (P.), the goal of the journey.
[3] Ar. *kuḥl.*

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115. *Zhe ma we-dho kwine miron ;*
me gere don we zenjiron ;
kawre süire ru be khuryon.
Below me there are the tents of the Mirs.
I am tied with chains,—
(she) is white and red, (her) face (covered) with traces of small-pox.

116. *Dile mene chi we dard-a ;*
wo dutora ru wa parda ;
li me katia cha darda.
What sorrow is in my heart!
I play on a *dutār*, bending over the stops of the finger board.
What sadness fills me!

117. *Ashkowota wa päykom-a ;*
moyne orom zhoine khom-a ;
murchak bewe azĭ poma.
There are rumours in Askhabad.
Slow down the mares, they are perspiring.
go slowly, I will be on guard.

118. *Le lowuku chara moni ;*
we heyline we keldoni ;
ta mole ma kharow doni.
Ey lad, why art thou remaining behind?
(Thou) with a mirror and a phial of antimony,
thou hast ruined my house.

119. *Bedil kore sarowoni ;*
sisa dakä har du poni ;
ashke jone me haloni.
A desperate job is a camelman's work!
Both leather shoes become white.[1]
Love has captured my soul.

120. *Sar wa darow sar wa darow ;*
zha ishqi ta buma zerow ;
mol ki tunna jon da gerow.
(Thou) with coins on the head, coins on the head!
I have become thin out of love for thee,
(but) I am poor, even my soul is mortgaged.

121. *Keros Tafte dasmol Shomi ;*
poche kulen wa Nezomi ;
la rindie tu tamomi.
(Thy) shirt is of the Tafta cloth, the kerchief is from Syria.
Thou hast a skirt, a frock, and Niẓāmī slippers.
In beauty thou art perfect!

[1] The *charukh* when new, is of tan or red colour; when worn, the colour disappears, and it becomes dirty-grey.

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122. *Won shawono wo rüyono ;*
khaw da chowe ma nokawe ;
yor wa-tane ro nokawe.
Those nights, those days!
Sleep never comes to the eyes,
a lonely lover cannot sleep.

123. *Waren dawwon qator keni ;*
la Bojgiron maqal keni ;
jel-u sarkesh zha sar keni
Come, let us carry the caravan to the road,
let us make a halt at Bājgīrān,
and take off the covers and bridles.

124. *Ware mole ma wa soz ke ;*
tirma beber wa keros ke ;
yo bedhe mu kho keros kem.
Come, get my house put in order,
take *tirma* cloth, make of it a shirt (for thyself).
Or give it, I will make a shirt myself.

125. *Azĭ tema zha Faraske ;*
ashke sile dekhe uske ;[1]
dele ma wa sule kask-ä.
I am walking from Farask.
The tears pour (from my eyes) and fall down, with a noise.
My heart is with that one, who has green slippers.

126. *Yek tu bewi yeki az-em ;*
charä nokon gowe pazen ;
darde ta keriya taze.
Be thou on one side, and I will go on the other,—
cows and sheep cannot graze (together).
Thou hast renewed (my) grief.

127. *Azĭ tema zha Mashate ;*
sewo süire la sapate ;
nowe yore Nawo'jon-a.
I am walking from Meshed.
Red apples are in the basket.
The name of (my) beloved is Nabāt-jān.

128. *Showe rüye az da chule ;*
buma rige bene kule ;[2]
az ashiki poche qulin.[3]
Night and day I am in love in the desert.
(moving) like sand at the bottom of the river.
I am in love with one dressed in skirt and frock.

---

[1] Apparently a corruption of P. *āwāz* and *ke*, the 3rd p. sing. from *kerin.*

[2] *Kole.* [3] *Kule.*

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129. *Abbasowot wa po takht-a ;*
Fotme khonum che badbakht-a ;
osmin dur-a zewin sakht-a.
'Abbāsābād is the capital.
How unfortunate is Fāṭima-Khānum!
But Heaven is so distant, and earth is so hard.

130. *Har kas yore man halgere ;*
morak wa sar del begere ;
darmon mäkän bo bemere.
Whosoever will steal my beloved,
shall get a snake into his body:
let them not cure him, let him die.

131. *La sar owe runishtiya ;*
daste ruye kho shushtiya ;
sawo menro kho kushtiya.
She sat at the stream,
washed her hands and face.
For my sake she killed herself.

132. *Maror taren ru la chion ;*
yeke begrem ya du dion ;
yor kachike narmä riyon.
(Like) stags (which) are running towards the hills;
let me take that one which follows the mother,—
a dear girl with a delicate face.

133. *Dele mene nola nola ;*
dona hanie ta dasmola ;
qor keriya neya mole.
My heart is groaning again, and again.
A handkerchief is put on thy forehead.
Thou hast become angry, and dost not return home.

134. *Beren beren Omor beren ;*
zha now gerten shomor beren ;
wi chow rash chow khamor[1] *beren.*
They are carrying her away, the people of the Amarlu tribe are carrying her,
they have stolen her, and are carrying the beauty from her people,
that black-eyed one, with intoxicating eyes.

135. *Qalam qatu qalam qatu ;*
zha bolkhone do dakata ;
rawisonak ghanimat-a.
O the straight statured, the straight statured,
she comes down from the upper storey.
Every kiss of hers is a fortune.

---

[1] Ar. *khammār.*

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136. *Chara nonen tu da pezhi ;*
khuyni boron tu darizhe ;
min dawini khwa dakuzhi.
How many loaves thou art baking !
Sweat is pouring down (from thee) like rain.
When thou seest me, thou are killing thyself.

137. *Kachik chuna sar karizon ;*
nole durne katna rizha ;
aw chow rasho yore men-a.
Girls are walking towards the *kariz*,
in a line, like cranes.
That black-eyed one is my beloved.

138. *Manzilak miṇ Zaworon-a ;*
zha miṇ girten tazkirona ;
kalne kachkon sad tumon-a.
My halting place is Zawwārān ;
they have taken a passport from me.
The bride price of the girls is a hundred tumans.

139. *Azĭ tema zha Riwine ;*
dasmol dona sar berine ;
lowuk chuya kan kerine.
I am walking from Riwin.
A kerchief is tied over a wound.
The lad has gone to buy sugar.

140. *Mohen ġawra yore men-ä ;*
daṇge yore la miṇ khosh tä ;
chara bukum ta nodana.
That one on a white mare, is my beloved.
(The voice of the beloved is sweet to me).[1]
What can I do,—they will not give thee !

141. *Imom Rezo wa guldastä ;*
zawor tara dastä dastä ;
oghoy man-ä kamar bastä.
(The shrine of) Imām Riḍā has a minaret.
The pilgrims come in crowds,—
my father is that one with a belt.

142. *Kudho tare tu yore miṇ ;*
fikrak bekshin la bore miṇ ;
wi ta nowe medore miṇ.
Where art thou going, dear ?
Think somewhat of me,—
without thee I cannot live.

143. *Dari khuna ta dulat-a ;*
dare wa ke chi khalwat-a ;
nimza[2] *bozi chi namat-a.*

---

[1] This line apparently belongs to a different poem.
[2] Khorasani P., for *nām-zad*, bride, wife, etc.

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(Thou whose) house has the door consisting of two halves!
Open the door, what is this retirement?
Of what use is it to play being a (faithful) wife?

144. *Hiwa rüina hiwa rüin-a;*
la war diere buma khüina;
riskat[1] *bedha bema quina.*
The moon is shining and shining.
Let (even) (my) blood be shed at the door,—
give me permission to enter the house.

145. *Chike osmu chale nan-o;*
eho taren ilchie mano;
ilchini mi muʃzadan-o.
In the sky there are forty-nine stars.
Oh, they are gone, my messengers (to arrange the marriage).
(But) my messengers are knaves.

146. *Zhawro Oghi chi kar rä-y-a;*
zabor gashten nazargäya;[2]
Ogho bedha Fotimäya.
How far is it from this place to Mashhad?
The pilgrims have arrived near Naẓargāh,—
O Imam (Riḍā), give me Fāṭima!

147. *Bolokhona per beland-a;*
yodgorä tishtak rin' da;
araqchini khwa wa miṇ dha.
The upper storey is very high up.
Something good, as a souvenir,—
give me thine own skull cap!

148. *Sar wa karon sar wa karon;*
keros halda zha sar bäron;
amä moni zha kateron.
O thou, with silver coins hanging round thy head!
Open the shirt over thy breasts,—
we are left behind our mule caravan.

149. *La sar owe la sar owe;*
tongo dirizh doya nowe;
rindi yore har du chowe.
Thou who stands just at the stream,
with a long rope tied round thy waist!
The beauty of my beloved is in his two eyes.

150. *Chara chowe me la ta di;*
la hich bande Khwadhi nedi;
ghayrez wa ta miṇ yor nadi.

---

[1] Ar. *rukhsat.*
[2] *Naẓar-gāh,* the place from which pilgrims can see Mashhad for the first time.

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Why are my eyes fixed on thee,
they do not turn towards any slave of God ?
I see no beloved besides thee.

151. *Azĕ tarum wa rryo khwa-dho ;*
barfäk bori wa sar ma-dho ;
ta wa kudho del wa ma do.
I walk along my road,
and snow is falling upon me.
When wilt thou give me thy heart ?

152. *Kuloy la ta chite qalam ;*
zha ewurdo katima jam ;
khush akhtelote kem karam.
The frock on thee is of printed calico.
I have been with thee since sunset ;
(thou art) talking pleasantly, but not showing much kindness.

153. *Oshik urte wa chinor-a ;*
nowi doyke ta Gulzor-a ;
ta zha me keriya kora.
At the middle mill there is a chenar tree.
Thou whose mother's name is Gulzār,
thou hast become angry with me !

154. *Showe rashin wa torye-dho ;*
rune zaro wa budhye-dho ;
ma bukuzhen wa polye-dho.
The black night, darkness ;
I am like the yellow butter (sticking to the) bowl,—
let them kill me at (thy) side.

155. *Kerosi süir bo la ta ;*
tushte mine ta tunna ;
we hisir[1] *wi bidel nawi.*
Let thy red shirt be on thee ;
I and thou, we have nothing.
Better be a prisoner rather than marry against one's will.

156. *Pazi war ma mishin-a ;*
la kaluton dűishina ;
bozke pile tishina.
My cattle are all ewes,
they are milked on the hills.
(My) arms and shoulders are aching.

157. *Ta wa sare araqchi kar ;*
zilfon bardo wa qamchi kar ;
ma wa Khwadho safarchi kar.

[1] Ar. *asīr.*

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Thou hast put the scull cap on thy head,
thou hast made thy tresses a whip:
thou hast made me travel, by God!

158. *Bazhne derizh chinor nowa;*
zha now molon kenor nowa;
wa wi hole medor nowa.
The tall statured one does not come to the chenar trees.
She does not come out of the camp.
(I) cannot continue if things are like this.

159. *Kerose la ta owi-y-a;*
ma wa ta nokir dohwiya;
bazhne yore zärowi-y-a.
The shirt on thee is blue.
I have not quarrelled with thee.
The stature of my beloved is slender.

160. *Az shawetim buma mara;*
warkaw hanni chulo fara;
nä ta khir di nä ma bāra.
I am burning like the *marha* grass.
Get up, let us go to the wide steppes,—
neither dost thou see good here, nor do I see any profit.

161. *Chikh*[1] *la kowe, chikh la kowe;*
se[2] *zha poro-do dä dowe;*
ayer[3] *meri bedha jowe.*
(Hey, thou with the) overcoat long to the ankles!
A dog (catches thy) lappet from behind.
If thou art a man, give reply.

162. *Lo lowuku lo lowuku;*
mine norä bi dänduku;
wa khurin do[4] *mol handiku.*
Hey boy, hey boy,
my stomach is like a pomegranate without seeds.
Give me to eat, I have very little money.

163. *La sari ta jowe juri;*
wa rä tare bay dasture;
hifo ta ker zha mä duri.
Coloured cloth is on thy head,
thou walkest by the road like a prince.
What a pity that thou art keeping away from me.

164. *Aze dorem doro khorem;*
kurme kuti az dakhoren;
iru zha pesmum wa kore.

---

[1] *Chukh, chugha.* [2] *Sak.* [3] P. *agar.*
[4] Probably: I have not eaten anything since morning.

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I am like a tree, like a bent tree;
the wicked worms are devouring me.
To-day I am angry with my cousin.

165. *Az chuchiko per-perima;*
zha sar kalo khin perima;
khone bayon az kerina.
I will fly away like a sparrow,
from the village of the khān,—
the khān and the begs have bought me.

166. *Az chuchiko jam dawe ma;*
kuni soro bem barfe ma;
yo ta ninim yo khalke[1] *ma.*
I am like a sparrow amongst camels,
like a cold stream under snow,—
I am not thine, I belong to others.

167. *Wa qurwone bazhne khurda;*
wa rä tare murda-murda;
zha ta bewum nokom gurda (?)
Let me be sacrificed for thy short stature!
Thou walkest very slowly along the road,
I cannot come after thee, I am afraid (*sic*).

168. *Alo kachke Karamona;*
darizhyona now kharmona;
lowkon chuna wa armona.
Oh, the girls of the Karamanlu tribe
are scattered among the crops.
The lads walk in low spirits.

169. *Lo kachike tu Nowboghi;*
jowe rashin ta dastokh-ä;
har chi dawen bidimoghe.
Oh, girl, thou art from Nawbāgh.
thy black eyes are a prison.
Whatever they say is nonsense.

170. *Shawe hotä ro katini;*
chowrash hota däre kuine;
bo beshawte mole dene.[2]
Night arrived,—the time to sleep.
A black eyed one approached the door of the tent,—
let all the treasures of the world be burnt!

171. *Wono bog-än boge buston;*
kalatä ma kore uston;
mame gelur pore duston.
Here are the gardens, many orchards.
Our village is built by architects.
High breasts[3] are a boon for friends.

[1] Ar. *khalq.* [2] Ar. *dunyā.* [3] Or "high-breasted ones."

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172. *Azĭ tema zha Cherie;*
sisa buza nolo harye;
dile ma ber we periye.
I am coming from Cheri.
Fair, pale one, like wool,
that peri has stolen my heart.

173. *Az kulläke ta beberem;*
kismat[1] *bewe ta halgerem;*
yaraqe wi az bekerem.
I will cut thy coat;
(if this will) be (my) fate, I will marry thee;
I will (also) buy the galoon (for the coat).

174. *Parton shawti wa urancha;*
tu la kho ka tazä nimcha;
az kurwone mame guncha.
May Parton be burnt with its clover hay!
Thou hast put on a new waist-coat.
May I be sacrificed for the sake of the bud-like breast![2]

175. *Darde dile min koria;*
nole rash ke bukhoriya;
kuse[3] *yore men khoriya.*
The pangs of my heart are violent,
(it) has become black like a furnace;
longing for my beloved has ruined me.

176. *Azĭ tema azĭ nema;*
burji kalle yeki kem-a;
kem kharji ma nokom bema.
I am walking, (occasionally) stopping,
one amongst the towers of the village is missing.
I am poor, (therefore) I cannot come.

177. *Aze gulem gulbun ta ma;*
la kunore kawno ta ma;
har dar ḥari yore ta ma.
I am a flower, thy spray of flowers,
I am in the corner of thy head-kerchief.
Wherever thou wilt go, I will remain thy lover.

178. *Dare kale la man mager;*
safari män rou[4] *ma mager;*
az kuti-ma men halmager.
Do not bar me from the door of the village!
I am going on a journey, do not detain me.
I am not good-looking, do not touch me.

---

[1] Ar. *qismat.*
[2] Or "bud-like-breasted one."
[3] Ar. *ghuṣṣat.*
[4] For *rä, re.*

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III. MISCELLANEOUS SONGS OF DIFFERENT METRES.

179. *Halkeshyon sar kulute Ali-Wali;*
bon dakä hazrate Ali-Wali;
tawarzine wi zha tulo we noqro;
.....?
halkeshyon sare chie Allahu Akbar;
widho dachuna Ali wa Kambar;
Duldulu warkato range suweydo;
kamarbande wi ziwu zar.

'Alī, the Saint of God, is riding up the hills,
he utters a call, the holy 'Alī, Saint of God.
His saddle hatchet is of gold and silver,
.....?
They are going up the mountain of Allahu-Akbar,
both are going there, 'Alī and Qambar.
He is riding Duldul, which shines with light.
His belt is of silver and gold.

180. *Alow jigi nänä jone;—nowe bere ta näzonem;*
alow kachik kachik jonem;—won kachike zhene biyon;
alow jigi nänä jonem;—dagerena sare räyon;
tu kerose az qaytonem;—tu ke pazi az shewonem;
tu ki boghi az boghwonem;—.....?
tu gul nine bebezdinem;—nuqul nine dokutinem;
zha zine-dho kallapo ker;—sare dile ma belo ker.

Hey, dear, thou whose brother's name I do not know!
Hey, girl, those girls are the wives of the begs.
Hey, dear, they wander on highways.
Thou art the shirt and I am the edging, thou art the sheep and I am the shepherd.
Thou art the garden and I am the gardener.....?
Thou art not a flower that I may break off, or a sweetmeat that I may chew.
She alighted from the saddle, and brought calamity into my heart.

181. *Kachke Kumishi;—shiräfurushi;*
kachke Oghoji;—bädän koghazi;
kachke Madani;—nozäk bädäni;
kachke Sabzewor;—dar zire kursī.[1]

The girls of Kūhmīsh are selling grape juice.
The girls of Āghāch have a body white like paper.

---

[1] The language of this song is a sort of a Kurdo-Persian jargon. The *kursi* is a wooden stool; in winter the Persians put under it a tray with hot charcoal, sit round it on the floor, stretching their feet towards it, and cover the whole thing with blankets.

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The girls of Ma'dan have delicate bodies.
The girls of Sabzawār are sitting at the "*kursī.*"

182. *Gurji zha mol wa dar kat ;—we duloke*[1] *norinji ;*
we kurreki awreshum[2] *;—loik*[3] *wa suli Gurji ;*
ta mole ma li-doni ;—wa lawosi[4] *Kurmonji.*

Gurji appeared from the tent in orange coloured trousers,
in silk socks, matching the "Georjian" slippers.
Thou hast ruined my house (by appearing) in a Kurdish dress!

183. *La mektebe*[5] *bulandi ;—da hole me nowini ;*
koghazeki bishinem ;—mäla nini bekhuyni ;
zha hasrate deley miṇ ;—khire bāre nowini.

O thou, in the high-built house! Thou dost not look upon my position.
I will send (thee) a little bit of paper,—thou art illiterate to read it.
In the grief of my heart thou wilt not see any profit or advantage.

184. *Dile mene nola nola ;—dona sare khwa dasmola ;*
bare shirin nuko tola ;—ma wa ta keriya hola (?).

My heart groans and groans, I put a kerchief on my head.
The sweet breast is now bitter, I become affectionate towards thee.

185. *Del wa qirmiz khamili ;—chuye seylo Gulshone ;*
loyeke busä kawe ;—belderchi ko-damone.

My heart is with the one clad in red, with Gulshān who takes her walk,
moving like a white partridge, or like a bustard at the foot of the hills.

186. *Iru la miṇ asar*[6] *ker ;—shemole nozenine ;*
la olame[7] *khawe-dho ;—chuma Makke Madine.*

To-day the gentle breeze made such an influence on me
that in my dream I went to Mekka and Medina.

187. *La moyne heyshin ;—la tipo peyshin ;*
la moyne ǵawra ;—kholek la puza ;
la haspe rasha ;—sare la arsha.

Riding a grey mare, first in the party,
on a white mare, with a mole on her upper lip,
on a black horse, with his head as high as the sky.

---

[1] *Dulāq*, trousers which Persian women put on when going out.
[2] *Abrīshum.* [3] Ar. *lā'iq.* [4] Ar. *libās.*
[5] Literally: school; this term is also applied for every big house.
[6] Ar. *athar.* [7] Ar. *'ālam.*

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188. *Shalwor khish-khish ;—wirdho*[1] *bekish ;*
shalwor mini ;—bande Rumi ;
shalwor marmar ;—mer zhi Barbar.[2]
Thou with rustling skirt! come nearer!
Thou with blue-coloured skirt, with a Turkish belt!
Thou in a marble-coloured skirt, whose husband is a Barbari!

189. *Ware ġawri ware ġawri*
khom barendi
zha berin istauri
qasoy wa ta kere jawri.[3]
White ewe, white ewe!
Thou who never hast begotten (*sic*),
art fainting away from wounds!
The butcher[4] treats thee so cruelly.

IV. FRAGMENTS OF THE POEMS ASCRIBED TO JA'FAR-QULĪ.

190. *Ay dil mäwu maghrur—ghururi jawoni chu ;*
kuwat namo la zhungo—zuro palawoni chu ;
nur namo le chowe ma—Ismoile kurwoni chu ;
ayome hawos make—zuri palawoni chu ;
hazrate Muhamad hota wo i dunyo ;
Qurone khwa doni aw-zhe chu.[5]
O heart, be not proud, the pride of youth has gone.
Strength does not remain in the knees, the athletic robustness has gone.
Light does not remain in my eyes, (but even) Isma'īl has been sacrificed.
Do not spend thy days in passions, before the athletic robustness has gone.
(Even Muḥammad who came to this world
bringing his Coran, also has gone).

191. *Jafar-kuli bichora ;—berafte kä zakote ;*
Malwori dona Taton ;—berna Mahmatowote.
The unhappy Ja'far-Qulī was collecting revenue.
(At that time) they have given Marwārīd to the Persians (who) took her to Muḥammadābād.

---

[1] *Wi-dho.*

[2] This, in fact, is an ordinary tristich, of eight syllables in a line, but each verse has an internal rhyme.

[3] This poem is extremely popular. It may be connected with some ancient custom of "sham-ġanger" against the butcher or any one slaughtering an animal.

[4] Some "strong" expressions usually are here inserted, like *molshin, molkharow*, etc.

[5] The last lines are probably taken from a different poem.

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192. *Jafer-Quli Sanum-khon ;—bon ke nole bulbulon ;*
bedha mädhoyi dilon ;—zha ta te bine gulon.
Ja'far-Qulī, surnamed Ṣanam-Khān, sings like a nightingale :
fulfil the desire of the hearts, thou, from whom comes the aroma of flowers.

193. *Noti gule gulowe ;—dalil bedha jewowe ;*
ori ujigh shur madha ;—dashawtini kewowe.
O thou, like a rose, or rose water !
Give (me) a straight answer.
Do not stir the fire in the hearth,
thou wilt scorch (me like) roasted meat.

194. *Kachik halestiyo bewe ;—bowe gu azĭ tima ;*
dardak la bowe kawe ;—az buma hakima ;
darmonaka libekam ;—helin howu sima.
The girl rose to go, the father said : "I am thirsty."
—"May the illness overcome the father, am I a doctor ?
Can I cure it ?—Take it, let it be pus !" [1]

195. *Gule la chion buna kharmona ;*
showe keshyona rüiye tush nemona ;
zilfo biyer bekshin wa lamona ;
wa lamon do har di kushe mamona.
Flowers on the hills have become dry,
nights have become long, days have become very short.
Grasp and pull (thy) hair with (thy) hands,—
with (thy) hands tear both nipples off (thy) breasts.[2]

196. *Jafar-kuli bichora ;—iru warkat ya sayle ;*
durbin haloni bif keri ;—la riye kulle jahone ;
ey Doude zereh-soz ;—tu darde ma dawo kä.
The unfortunate Ja'far-Qulī returned to-day from his journey.
He took field glasses and began to look all over the world (saying) :
"O David, the maker of coats of mail, heal our sorrow !"

197. *Chuma we dare korak—periyek dan hole ;*
sisa buza perishon—noti miyon dakole ;
zha mashriqu to maghrib—räe hazor sol-ä.
I went to the entrance of the cave, a peri-like girl was crying.
Pale, fair, being in distress, she was bleating like a ewe.

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[1] This poem apparently is a fragment of a story ; unfortunately none of my informers could explain what it was.
[2] The usual way of expressing great sorrow amongst the Oriental women.

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From the East to the West the journey takes a thousand years.

198. *Showa rüe bon dake ;—wa ſaki dutore ;*
shewo akhir chorshembe ;—kata wa ozore ;
müe bedha ya zilſe khwa ;—zha ſaki dutore.

Night and day I am playing on the strings of the *dutār*.

On the night of the last Wednesday I met sorrow (misfortune),—

give me a hair from thy lock to make a string on the *dutār*.

V. STORIES IN PROSE.

199. *The story of Muḥammad-Qulī Beg kidnapped by Turkomans.*

Madkuli-bekek bu gertere kale bu. Rüyak war kata shikore. Shikorak tir ker. Deljiǵaré wi kawow da ker. Di gúrra-gúrra seworon-a. Tamosho ker di Turmon-a. Madkuli-bek torzan bu deyrezan bu. Wasfé wi chuya now Turmone. Sewore Turmon hotena now rudkhone, hotena jam Madkuli-beke. Madkuli-bek gu: "men muhlat beden. Az la wi kawro nowé kho benewisem. Miṇ biṛna now Turmona. La du miṇ náǵaren." Madkuli-bek nowé kho nawisi la we kawro. Turmona haloni beren Madkuli-beke. Diyo Madkuli-bek iwor bu di khawar nawu. Suweydo odam warkihs (chuya) la now chiyé-dho. Daǵaren geshtena wi kawro. Di newisina ki la miṇ naǵarin [ki] az biṛiṇa now Turmona. Diye Madkuli-bek wa ǵariya chuya kale. Tilgirof ker Teyrone ki Madkuli-bek berena now Turmona. Zha wi podeshohe penj hezor sewor shon la now Turmone. Penjsed tumon dona Madkuli-beke zha Turmona kerrin. Haloni hoten Teyrone. Wasfé wi chuya jam podeshoh. Torzan bu deyrezan bu. Diye Madkuli-bek penjä mer haloni chuya Teyrone. Di Madkuli-bek la utoqe runishtiya tor lidakhene. Dilé wi qam[1] girte bu. Gu: "Khudoyo diyo miṇ wa miṇ gin (sic)." *Wa jorak diyó wi kata mol. Das owet chuya ruye. Wa giriyo ki wo koleko zha hush bu. Posh du soten hota hushíye kho. Madkuli-bek gu: "dodeyi mägiri dilé ma dakhoze kun buwe."....(Lowe kho haloni hoten wuloyete khwa).*

(*Translation.*)

There was a man called Muḥammad-Qulī Beg, the headman of his village. Once he went out hunting, shot some game, cooked the heart and the liver; heard the sound of horses, looked, and saw that these were Turkomans. Muḥammad-Qulī Beg was a famous musician, player on the *tār* and tambourine. His fame spread amongst the Turkomans.

[1] *Gham.*

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Turkomans entered the river-bed, and came to Muḥammad-Qulī Beg. He said to them: "give me a moment, I will write my name on this stone (and also that) I am carried away by Turkomans, so not let the people search for me." Muḥammad-Qulī Beg wrote his name on the rock. Turkomans took him with them. It was evening, and the mother of Muḥammad-Qulī Beg had no news of him. In the morning she took some men (and came) to the hills. They searched and (at last) noticed that rock. They saw there written: "do not search (for me). I have been taken away by Turkomans." So the mother of Muḥammad-Qulī Beg returned and came to the village.

She wired to Tehran that Muḥammad-Qulī Beg was kidnapped by Turkomans. The shah for this reason despatched five thousand cavalry to the Turkoman province. They gave (paid) five hundred tumans and bought Muḥammad-Qulī Beg back from the Turkomans, brought him to Tehran. The fame of Muḥammad-Qulī Beg reached the shah: he was (a good) player on the *tār* and on the tambourine.

His mother took with her fifty horsemen, came to Tehran. She saw Muḥammad-Qulī Beg sitting in a room, playing on the *tār*. His heart was full of sorrow, he said: "O God! send (?) me my mother!" At this instant the mother entered the room. She embraced him, and kissed his face. She cried so much that she, the old woman, fainted. Only after two hours she recovered to her senses. Muḥammad-Qulī Beg said: "mother, do not cry, my heart will break."....(At last she took her son and they went home).[1]

200. *The story of 'Alī, the fool.*

Ali dehenak bu Ali okilak bu har du bero bu. Ali wa Ali dehen-ro gu: "ḥarra kalä zha mol-do non zha mä wari." Ali dehen warkat chu, chuya kalä. Tandurake non haloni hot dore khoy shäfti haloni da chu. Wa jorak tamosho du kho ker, tamosho siye kho ker. Di wa khiyolé we ki odamaka tara. Gu: "berchi bui?"—gu: "e!" Du non warkhis doni. Diso niw oghojak chu diso tamosho ker diso di siyä. Gu: "bichora berchi-y-a. Nonak den."[2] *Warkhis doni. Noné kho tawo ker. Chuya jam beré kho. Ali okilak gu: "ta niṇ oni?", gu: "odamak bar rä berchi bu ma do khor" Gu: "ajab ta che ker." Ali oghil gu: "tu lawro besaken to az ḥarrema kalle niṇ binem." Ali dehen gu: "ḥarra!" Ali dehen paz kash do. Oniya sar koniya. Doraka tut hawu. Ali dehin chuya sar doré tut darit, la sar har paze ke tut hawu haloni khur. Zha ruyé wo poch ker. La sar har kizhon*

[1] There is a long story, in the same strain, about the shah trying to keep Muḥammad-Qulī Beg at the court, as a good musician, but the text in my notes was damaged. So I omitted this portion as giving nothing new from the point of view of the language, which shows many signs of the slavish imitation of Persian literary style.

[2] *Sic*, obivously for *dem*.

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tun na wu dager dakusht. Zha wi paz ro-ker. Chuya geshta kolaḳ. Paz ow do. Har che ker zha wo pazo zha wi kolo rad bekä nochu. Gu: "harom boyon hun dakhozen wa sulé kho la owe likhenen." Bichoye kho zha jiwé kho warkhis chungulé wono zha kuloʃ warkhis. Wo pazono geshten meren. Ali okil zha kalä hot, gu: "Ali ku paz? Ta chara ker?" Gu: "atoata[1] *me nokeren miṇ geshte kusht." Ali okil gu: "or da mole bowe ta ḳawe! Ta molé ma kharow ker. Ajab che keriya ta. Wara ḥanni kalä." Hotena kale. Gohekä won riṇ hawu. Gu: "bero jon wi gowo buwa bufrush." Ali dehen gu: "cha ayba kho' aya." Gohoye haloni ber. Du oghojak chu zha kalä, geshta ḳalposek. Wa ḳalpose-ro gu: "goho nokeri?" Kalpose la sar ḳawre bu sare kho taw do. Ali dehen gu: "suweydo zīr az tem dah tumen bedha miṇ." Diso saré kho taw do. Ali dehen hota kala Ali okil bere wi gu: "ta goho chara ker?" Gu: "miṇ ferit." Gu: "ta wa cha qad*[2] *do?" Gu: "doya ke?" Ali dehen gu: "doya ḳalpose." Gu: "mole ta kharow bewe! Wiyo zha mine paz kir ta. Molkharow wara ḥanni." Har du zha won wa rä ḳaten. Hotena jam ḳalpose. Di ḳalpose la sar ḳewro. Gu: "molkharow ta akle kho tunna. Dorowé wiyo la ki ḳawre bu? Wara ḥanni. I sol ta zha berchiyon ma dakuji. Ali dehen wa ḳalpose-ro gu: "warin dorowé ma bedha." Kalposa kho likhis da kune. Kulenge keshon kuno. Kalpose warkhis, dorak likhis kusht. Wa ġariyo hota kalä.*

(*Translation.*)

There were 'Alī the fool and 'Alī the wise, both were brothers. 'Alī (the wise) once said to 'Alī the fool: "go to the village, bring me some bread from the house." 'Alī the fool started, went to the village. He took an ovenful of bread, then went to his tree, got a stick, and went back. Suddenly he looked behind him and noticed his own shadow. Saw what appeared to him to be another man. He said to it: "art thou hungry?" (And he himself?) said: "eh!" He took two loaves and threw them to it. Then he went half a farsakh, looked behind him and again saw his shadow. He said: "poor man, he is still hungry! Will give him a loaf." He took (another loaf) and threw it to it. (So) he wasted his bread. Having reached his brother, 'Alī, the wise, asked: "hast thou brought the bread?" He replied: "there was a man on the road who was hungry, so I have given it to him to eat." 'Alī the wise said: "what a (foolish) thing thou hast done!" (He) said (further): "remain here, and I will go to the village to bring the bread." 'Alī, the fool, said: "go!"

'Alī, the fool, began to drive the herd. He brought it to a spring. There was a mulberry tree. 'Alī climbed the tree and

[1] Ar. *iṭā'at.* [2] Ar. *qadr.*

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shook off the berries, and on whatever sheep the berries fell he took and ate them. He kissed the head of (every such sheep). But those on whom no berries fell he killed. Then he moved the herd from that place. They went to a river-bed, and he allowed the sheep to drink. Whatever he tried to do to get the herd from that stream-bed, they would not go. He said: "o you, scoundrels! You want to soak your shoes in the water." He took out his knife from his pocket and cut the hoofs from the legs of the sheep. Those animals died.

'Alī, the wise, arrived from the village and asked: "'Alī, where are the sheep? What hast thou done with them?" He replied: "they did not obey me, so I killed them." 'Alī, the wise, said: "o, may fire fall into the tent of thy father! Thou hast destroyed my property! What hast thou done! Come, let us go to the village!" So they came to the village. They had a good cow. ('Alī, the wise) said: "dear brother, take this cow and sell it." 'Alī, the fool, replied: "all right, no harm in it."

He took the cow and went. He walked about two farsakhs from the village and came across a lizard. He said to the lizard: "wilt thou not buy a cow?" There was a lizard on the top of the rock, it moved its head. 'Alī the fool said: "to-morrow at noon I will come, then thou wilt give me ten tumans." Again the lizard moved its head. 'Alī walked back to his village. 'Alī, the wise, asked the brother: "what hast thou done with the cow?" He said: "I have sold it." The brother asked: "how much was given to thee? To whom hast thou sold it?" 'Alī, the fool, said: "I have given it to a lizard." 'Alī, the wise, said: "may thy house be ruined! With this thou hast done the same as with the sheep. Hurry up, thou ruined one, let us go!"

So both started on their way. They came to the place of the lizard. They saw a lizard on the rock. 'Alī, the wise, said: "thou ruined one, thou hast no sense. In what grave can this lizard have money? Come on. This year thou wilt make me die of hunger." 'Alī, the fool, said to the lizard: "bring, give me money!" The lizard crawled into its hole. He then took a spade and digged out the hole of the lizard, hit it with a stick and killed it. Then he returned to the village.

IV. Vocabulary.

Note.—In this vocabulary many words are included which do not appear in the specimens given above. On the other hand, all ordinary Persian and Arabic expressions which can be easily recognised in spite of slight phonetical modifications, are here omitted. Whenever an idiom is also mentioned in A. Houtum Schindler's Beiträge zum kurdischen Wortschatze (ZDMG, vol. xxxviii, 1884, pp. 43–116), a reference is given (abbreviated as HS, the figure showing the page). Figures

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alone in brackets refer to the numbers of the specimens given above. Such references are given only in case of the rarer and uncommon expressions.

A.

ajutin (v.), Pres. *ajum*, to plough, work.
akhtelot, akhtulot (Ar. *ikhtilāt*), conversation, entertaining.
ali, oli (79) side, cheek (T. ?).
aljak, glove (woollen).
angelusk, angulusk, finger ring (HS, 49, *angelūs, hanelūsk*).
ark, house, upper storey.
äsh, osh, oshik, water mill (HS, 49, *ēsh*).
asmin, osmin, sky (cf. HS, 49).
astuq, ostuq, cushion.
awr, cloud.
azhmertin (v.), Pr. *azhmerem*, to count, calculate.

B.

baf-kol, grandfather (HS, 51, *bāwā-kāl*).
bag, bay, boy (T.), nobleman, prince.
bakhshi, wandering musician, singer, clown.
bakhshin, to grant, present. Causat. Pr. *bakhshinem*, Past: *bakhishondom* (cf. HS, 52).
bar, ber (1) side, direction, country; (2) breast, side of the body.
bāra (P. *bahra*), profit, advantage, use.
bäraf, bäraw, ready, arranged, prepared; *b. kerin*, to prepare, etc.; *b. bun*, to be ready, to appear (P. *ḥāḍir shudan*).
barendir, berendir, a sheep between two and three years of age (cf. HS, 53) (*shishnok* in Sabzawari); *khom-barendi(r)*, in No. 189, is explained as "too young, unripe."
barkh, lamb (HS, 53).
bast, dam on a stream (P. *band*).
bay, see *bag*.
baz, fat, grease.
bazhn, bäzhin, stature, figure, body.
bechi, beychi, bichi, finger.
belak, bilak, many, numerous, plenty.
belderchi, bustard (T. ?).
bele, yes (P. *balī*).
belir, beylir, flute.
ben, bin, bin, bottom, lower part of; as a preposition: below, under; also *zha ben—dho*, below, etc.
ber, brother.
ber, see *bar*.
ber, bere, eyebrows.
beraf, see *bäraf*.
berchi, hungry (HS, 52).
berchiyon (200), apparently Plur. from the preceding,—hunger.

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berin, bärin, wound, ulcer, boil, etc.
berin (v.), Pres. *berem*, to take away, carry, etc.
berrin (v.), Pres. *berrem*, to cut, split, etc. (also *burrin*).
berush, cauldron.
bezdin, bizdin (v.), Causat. Pres. *bezdinem*, Past: *bezdondum*, to tear, pluck, break off (flowers) (180).
bhor, spring.
bi, bie, wi, wie, willow.
bichi, see *bechi*.
bicho ger, thumb.
bif (?) *kerin* (v.), to look upon, to watch (14, etc.).
bigwand, see *bugwand*.
bihin, bin, smell, aroma (HS, 54, *behīn*).
bilak, see *belak*.
bin, see *ben*; see *bihin*.
binem, winem; see *ditin*.
bir, memory, recollection; *bir kerin*, to learn; *zha bir kerin*, to forget.
biri (apparently Khorasani *biri*=P. *bīrūn*), the enclosure into which cattle is brought at midday from the pasture for milking. It is usually situated outside of the village.
birin, see *berin*.
bitin (v.), Pres. *bizem*, to knead.
biweḷ, nose.
biy (?), see *bag*.
biyon (3)=*bizhoṇg*, q.v.
bizhiṇg, bezhiṇg, sieve (HS, 54).
bizhoṇg, eyelash.
bodie, bodhie, budie, small saucer, bowl.
bol, lappet (?).
bolg, bolgiw, bolk, pillow, cushion (HS, 51).
bolkhona, upper storey of the house (P. *bālākhāna*).
borin, worin (v.), Pres., 3rd p. *bore*, it rains.
bo, boy, wind (HS, 52, *bē*).
boygush, baygush, owl (HS, 52, *bāyeqūsh*, orig. T. ?).
boz, river-bed, gorge (?).
bozin, bozun, a sort of bracelettes.
bozin, wozin (v.) (102), Pres. *wozem*, to play, to contest in sports.
bozk, arm (HS, 51, *bāsik, bāsk*).
budie, see *bodie*.
bugwand, bigwand, rug, bedding.
buk (42), bride, newly married woman, doll (HS, 54).
bus, buz, white, pale, fair, light (HS, 54).
bust, busta, span.

Ch.

cha, che, chi, what, how much (P. *chi, chand*).
chä, right, good, nice, smart; *chä kerin*, to prepare, repair.
chara, how much, why, what for (P. *chirā* and *chi qadr*).

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charondin (v.), to graze (trans.), Pres. *charinem.*
cherew, see *chirow.*
cherton, a sort of food, made of dried curds (*qurud*, *kashk*).
chi, *chie*, *ji*, Pl. *chion*, *chiyon*, hill, mountain (HS, 62, *cheh*).
chik, star, constellation (HS, 62).
chikh, *chukh*, winter cloak, *chugha*, q.v.
chilik, *chelik*, *cheylik*, *jeylik*, chicken, generally young bird.
chindin (v.), Pres. *chinem*, to sow.
chir (onomat.), clinking, the sound of.
chirm, leather.
chirow, *chire*, lamp, light, candle (HS, 62).
chorukh, *charukh*, a sort of footwear, made of one piece of leather, like American mocassins.
chow, *chiow*, *jiow*, eye; *chow-rash* (170), a black-eyed (girl).
chow-khor, squint-eyed.
chuchik, sparrow, desert lark (HS, 62).
chugha, a sort of a woollen mantle or cloak, sometimes lined with cotton, used as winter dress.
chuin (v.), Pres. *rem*, from *räwin*, or *ḥarma*, to go, to walk (cf. HS, 62).
chukh, *chikh*, see *chugha.*
chuqqur, *chukhur*, *zukhur* (?), a stony plain, valley (?).

D.

dä, *de*, *do*, *doyk*, *di*, mother (HS, 65, *dāk*).
daf (?) *kerin* (85), to look on, to watch.
dandik, seed, grain, stone.
daṇg (*daṇ*), voice, sound.
däräwin, liar.
darpa, trousers (of men).
därow, *derow*, *diriw*, money, coin.
däryo (?)= P. *darīda* ?—torn.
daskirt, betrothed, newly married, bride, bridegroom.
dasmol, handkerchief (P. *dastmāl*).
daw (P. *dūgh*), a sort of drink, made of sour milk and water.
dawa, *dawwa* (T.), camel.
de, see *dä.*
dehin, *dehen*, *dihin*, fool, mad (cf. HS, 68).
dehin, *duhin*, clarified butter (?).
den, *din*, again, another (?).
dene, world, wealth (P. Ar. *dunyā*).
derizh, *derezh*, long, tall, lengthy.
derow, see *därow.*
deyre, tambourine (P. *dā'ira*).
dhowa, see *dowa.*
di, see *dä.*
dighlon, hand spindle.
dihin, see *dehin.*

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dik, cock (HS, 69).
dirizh, see *derizh*.
dishin, *ditin* (v.), to milk.
diston, tripod on which the cauldron is suspended over the fire.
disu, again, second time.
ditin (v.), Pres. *binem*, *winem*, to see, look.
ditin, *dishin* (v.), to milk.
ditmon, *didmon*, daughter of an uncle, cousin.
diz, *dez*, thief.
dizon, *jizon*, razor.
doin (v.), Pres. *dhem*, *dha*, to give, let, allow, etc.; *haldoin*, to lift, move up, raise.
doho, yesterday (cf. HS, 68, *duhū*, *dūkeh*).
domor, step-mother.
donin (v.), Pres. *doniem* (?), to place, put, set, pitch (a tent), etc.
dopir, grand mother.
dor, *dol*, *do*, tree, wood.
dos, a pit, in which lime is prepared.
dowa, yesterday (?).
dowat, wedding (P. Ar. *da'wat*).
dowe, *dowon*, skirt, lappet (P. *dāman*).
doy! doye! beware, alas, etc. (P. *dād*, *dād-u bīdād*).
doyk, see *dä*.
doynin (v.) (176), Caus. from *doin*, q.v., to spread.
du, behind, after.
duek, *dulek*, tail.
duhin, *dehin*, butter (?).
duishin, *duitin*, see *ditin*.
duiz, *diz*, right, ready (?).
dulat, double (a door), consisting of two halves.
dulup, drop.
dumon, fog.
dumon, lappet, skirt.
dun, *dund*, wasp.
durna, crane.
durin (v.), Pres. *durum*, to sew.
dusuwa, the day after to-morrow.

E.

elag, *helag*, *helek*, sieve.
estin, *istin* (v.), Pres. *estem*, to stand up; *halestin*, to rise, etc.
ewor, *iwor*, *evor*, *evur*, evening, dusk (HS, 50, *īwār*).

F.

fah, *fakh*, mouth (101), opening in a stringed musical instrument.
fara, wide, broad, remote (P. *farāh?*).
ferin (93), see *perin*.
fish, *fishk*, sniffling; *f. kerin*, to snifle.

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G.

ǵarin̈, gerin (v.), to wander, roam about, to search.
ǵas, ǵaz kerin (8), see *ǵazin.*
ǵaw, ǵap, word, speech.
ǵaw, ǵawe, depression of soil, ravine (P. *gawdī*).
ǵawr, ḱawr, white, light, pale.
ǵawr, ḱawr, ḱawir, stone, rock; *ǵawre-ish*, mill stone.
ǵazin (v.), or *ǵaz kerin*, to bite.
gelur, gulur, round, spherical; high (about breast of a woman, 171).
ger, gir, large, big; senior, older.
gerin, see *ǵarin.*
gerin, girin (v.), to weep, cry.
geshtin, the same as *ǵarin*, q.v.
gezag, thief, brigand.
gezer, beet-root.
gezlik (T.), knife.
ghir kerin, to roll.
gir, see *ger.*
girin, see *gerin*, or *ǵarin.*
girrak, clay, mud.
girtin (v.), Pres. *girem*, to take, touch; *halgirtin*, the same.
go, gow, goh, bullock.
goris, millet (P. *gāwars*).
gowja, gugja, green or white plum.
gudh, guch, ear; *gudho girtin*, to hear, listen to.
guli (28), tresses (of a woman).
gullek, calf.
gulur, see *gelur.*
gun, gon, testicle.
gur, wolf (P. *gurg*).
gur, gurr, bald (Khorasani P. *gar*, lit. P. *kal*).
gurda (167), frightened (?).
gurra-gurra (onomat.), sound of thunder, roar.
gutin (v.), Pres. (*da-*)*wem*, to speak, talk.
guwa, talk, gossip, rumours.
guwshondin (v.), Pres. *guweshinem*, to squeeze, Caus. of *guwshin.*

H.

hafshon, a sort of thorny weed.
hak, hag, häk, lime.
haldoin, see *doin.*
halestin, see *estin.*
halgirtin, see *girtin.*
halonin, see *onin.*
handek, handik, little, a few (P. *andak*).
hanewor, smooth, level (Khorasani P. *hamwār*).

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hang, hong, hon (39), call, appeal, cry (?).
hani, hanye, ani, eni, forehead.
hanisht, enisht, henisht, elbow.
hari, harye, hardi, wool.
harrin (v.), Pres. *harma*, to go, walk.
hasin, hasen, isin, asen, iron (HS, 48).
hasp, horse, pony (cf. HS, 48).
haste, bone.
hawir, paste.
hawol (75), a relative (=P. *ham-āl* ?).
hawshon, see *hafshon*.
hek, heg, egg.
hek, see *hak*.
helak, see *elag*.
heli, heyli, hili, looking glass, mirror.
heli, hili, hilli, helin, nest (of a bird).
her, herd, soil, earth, mud, country, fields.
herch, bear.
herme, pear (P. *amrūd*).
heshin, heyshin, hishin, green, light grey, bluish.
heylin (118), see *heli* (mirror).
hifo, alas, pity (Ar. *hayf*).
hiji, a *hājjī*.
hilin, see *heli*.
hilonak, cradle.
hin, still, yet; so much.
hin, hen, in, inj, small, fine.
hisir, prisoner, slave (Ar. *asīr*).
hiw, moon, light.
hiwi, ibex.
hiwolak, broom (?).
hizing, hizim, firewood, fuel (HS, 51, *ēznik*).
hodho, there.
hong (52), see *hang*.
hor (40), the same as *or*, q.v. ?
hotin (v.), Pres. *tem*, to come, to arrive.
howerkhu, a thick woollen rug, used as table cloth. It is square, holes are cut near the edge, on all four sides. A rope is passed through the holes, so that after a meal, by pulling it, it is possible to tie what remains, rendering the rug into a sort of a bag, and to hang it somewhere to keep safe from dogs.
huchik (17), sleeve.
hur, small, the same as *khurd* (apparently merely a corruption of the latter).

I.

igde (38), sanjit tree, Elaeagnus angustifolia (HS, 51).
imom, also used in the sense of the "shrine, or grave of a saint."
in, hin, inj, small, fine, thin.

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ir, *or*, fire.
iru, to-day (HS, 50).
ishin (v.), to ache, to be painful (156).
ispe, louse
istaure, barren, childless (HS, 49, *istaurah*, *saurah*).
iwor, *ivor*, evening.

J.

jä, barley (HS, 61, *jeheh*).
jagna, falcon, hawk.
jam, with, by side, together (P. Ar. *jānib*).
jawr, violence, insult (Ar. *jabr*).
jel, *jil*, horsecloth.
jeri, *jiri*, a sort of a woman's frock, with tight sleeves.
jewe, twins.
jeyda, more (corrupted Ar. *ziyādat*).
ji, *je*, place, bed (P. *jā*).
jinor, *jenor*, neighbour.
joni, young.
jor, one time (P. *bār*); *jor-jore*, from time to time.
jow, reply (P. Ar. *jawāb*).
jow, see *chow*.
jwan, *jon*, soul, life, spirit; *jwan doin*, to die, expire.

K.

kachak, *kajak*, hairlock.
kachik, *kechik*, *kachk* (1) small, little, young; (2) daughter, girl, maiden.
kadhak, cotton homespun.
kafchir, sieve spoon, for collecting foam (P. *kafgīr*).
kahku, *kaku*, father (when addressing only).
kajak (85), see *kachak*.
kajin, uncoloured silk.
kala, *kale*, *kalle*, village, hamlet (P. Ar. *qal'a*).
kalghar, a sort of thorny weed, used as fuel (47).
kallik, small finger.
kaln, *kalin*, *kaling*, bride's price (T.)
kamar (?), black, dark (33).
kamarchi(n), frock.
kanin (v.), to laugh, smile.
kar, ass.
kar, *qara* (T.), black spot, shadow (21).
karin (v.), to appear black, dark, to come in sight (25, 74, 108).
kärin, see *kerin*.
karpuz, water melon.
kask, green.
katin, *kawtin* (v.), Pres. *kawem*, to fall; *dokatin*, *likatin*, to fall down, to descend; *rokatin*, to lie down, sleep; *warkatin*, to rise, get up, jump.

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kaw, kawk, partridge.
kawn, kerchief by which women cover their heads.
kawr, see *ǵawr*.
kaylin, kaylu, see *kaln*.
kaytiq, Adam's apple.
kech, flea.
kehik, gihik, dung.
kel, kil, collyrium, antimony (Ar. *kuḥl*).
kelak (66), giddiness (?),—Khorasani P. *gilew*.
keldon, a metal bottle for keeping collyrium.
keli, quarrel.
kelut, see *kulut*.
kenj (?), overcoat.
kerin (v.), Pres. *kem*, to do, make, act, etc.
kerge, hare.
keros, shirt, frock of a woman.
kerrin (v), Pres. *kerrem*, to buy.
keshin (v.), Pres. *keshem*, to draw, pull, etc.
keshondin (v.), Pres. *keshinem* (Caus.), to draw, drag, drive.
khalta, bag, hawersack.
khamịlin, khamulin (v.), to adorn, dress smartly.
kharow, ruined, brocken, bad (P. *kharāb*).
khaw, sleep (HS, 65).
khawir (19), field (?).
khazon, khizon, child (cf. HS, 65).
khestin, khistin (v.), Pres. *khem*, to hit, strike, beat; *warkhestin*, to summon, take up; *likhestin*, to beat down, hit.
khin, nobleman, *khān*.
khin, khuin, blood, P. *khūn*.
khine, see *kwin*.
khir, good (Ar. *khayr*); *khire*—(used as a preposition), for, for the sake of.
khire-shar (*khayr wa sharr*) *kerin*, to take auguries.
khirza, nephew (sister's son or daughter), P. *khwāhar-zāda*.
khishk, khuishk, dry.
khistin, see *khestin*.
khole, khwoḷe, khwḷe, earth, mud, dust.
kholow-ir, ashes.
kholṭiq, aunt (mother's sister).
khom, wet, fresh, perspiring.
khopondin (v.), Pres. *khopinem*, to deceive (Caus.).
khor, wrong, bent, crooked.
khorbinek, nosering.
khorze, see *khirzä*.
khos, barefooted (?).
khosh, khwash, pleasant, agreeable.
khoy, khwe, salt (cf. HS, 64, *kheh*).
khuin, see *khin*.
khuynin, to read, recite.

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khulla-khulla (onomat.), bubbling, noise of running water.
khullāk, lame.
khure, small pox (HS, 65, *khoreh*).
khurin (162), morning meal (?).
khurjin, saddle-bag, also saddle (2).
khuyn, *khwin*, see *khin*, blood.
Khwadhe, *Khwodhi*, God
khwang, sister (HS, 63, *khāng*).
khwash, see *khosh*.
khwe, see *khwo*.
khwo, *khoy*, *khwe*, sweat (HS, 64, *khoh*).
khwozin (v.), Pres. *khozem*, to wish, desire, ask.
khwurin, *khworin* (v.), Pres. *khom*, to eat.
kishin, see *keshin*.
kol, melon.
kolak, old, aged.
kola-kola (onomat.), bleating.
kolin (v.), to bleat.
koni, *konye*, *kuni*, spring, brooke, well.
konin (v.), to be able; neg. *nokom*, *nokoy* (15), *noko*, cannot.
kor, cave, crevice (P. *ghār*).
kor, *qor*, anger, quarrel (Ar. *qahr*).
kori, right, proper, well aimed.
kow, ankle.
kowur, *kower*, a male sheep, one year old.
küir, blind (P. *kūr*).
küin, see *kwin*.
kul, handful, fist.
kul, wound, ulcer.
kulä, *kullä*, a woman's frock.
kulle (34), a bit of wool (from which a thread is spun).
kulesh, *kuleshk*, field after harvest (99).
kulij, a sort of frock.
kulin, *kullin* (v.), to boil; to dig.
kulow, felt cloak, or mantle.
kulut, *kelut*, hillock, hills covered with grass (used in Khoras. P.).
kum, hat (?).
kun, *kon*, hole, cave, crevice, well; anus.
kuni, see *koni*.
kunder, pumpkin.
kundi, a big earthenware jar used for storing flour (also used in Khoras. P.)
kur, short; *kur kerin*, to cut hair, to shave.
kur (10), row, line (?).
kurdhik, *kurtik* (49), camping ground (?).
kurk (111), woollen sock (*kurgi* means soft wool in Khoras. P.).
kurpi, bridge (T.)
kurum, worm.
kurtik, see *kurdhik*.

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kus kerin, to bite, attack (about dogs) (83), apparently for *ǵaz k.*, q.v.
kush, top, nipples of breasts.
kushtin (v.), Pres. *kuzhem*, to kill, murder.
kuti, bad, unhappy, ugly.
kutin (v.), to chew, Caus. *kutinem* (180); to knock.
kuz, vulva.
kuz (?), a dug out for sheltering lambs.
kwin, *qwin*, *küin*, *kuyn*, *khwin*, *khuin*, tent, house.

L.

laku, where.
lam, palm of the hand, fist.
laṇgar, a big tray; a wooden bar for shutting doors; *wa laṇgara*, slowly.
lanj, fight (Pers. *ranj*).
likhestin, see *khestin*.
listin (v), Pres. *lizem* (37), to play (?).
lochin, mad, fool.
lonin, see *onin*.
lorzin (v.), to shiver, tremble.
losh, flesh, carcase, carion.
low, *lou*, *loe*, *lowuk*, *loek*, son, boy, lad.

M.

mäla, *mälla*, mullā, a literate man.
mam, breast of a woman.
maqal (123), halting place.
mar, *marh*, *markh*, a sort of a thorny grass used as fuel.
maror, stag, deer.
maṭi, *mati*, aunt (father's sister).
maz, *mazin*, elder, senior, chieftain, headman.
mehak, *mehek*, month.
mer, man, husband.
mer, death.
merin (v.), Pres. *merem*, to die.
mhe, *mi*, ewe, she-goat.
mihwon, *miywon*, *miwon*, guest.
mini, blue, deep blue (like enamel).
mirishk, hen, bird in general.
mis, *miz*, *mizd*, urine.
mishk, mouse.
mishtin (92) (v.), to sweep, clean (?).
mist, handful; fist.
moin, *moine*, *mohen*, *moyne*, mare.
mol, tent, house.
molshin, one whose house caught fire (an abusive expression).
moṇǵa, cow.

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monin (v.), Pres. *minem*, to remain, to stay.
morj, lofty high.
mosi, *mosu*, fish.
moya, *meya*, female ; she-camel.
muſzada, knave, villain (P. *muft-zāda*).
murä (10), a sort of cloth or frock.
murchak, slowly.

N.

nawisin (v.), to write.
nin, *non*, *nun*, *nu*, bread.
ninik, nail (of a finger).
nir, *ner*, male (camel, goat).
nishtin (v.), Pres. *nim*, to sit ; *runishtin*, to sit down.
niw, half.
niwcha (P. *nīmcha* ?), frock with short sleeves.
nochok, shelter for cattle (?).
noko, at once, now.
nol, horse shoe (Ar. *na'l*).
nol, *nwol*, gorge.
noli, bed sheet (?).
nolin (v), to groan.
nolon (?), like.
noti, *notow* (51), similar, like.
now, name.
now, middle, waist ; (prep.) amidst, in, inside, etc.
nowa, *nuwo*, turn (Ar. *nawbat*).
nowik, navel.
nowoli, naughty, wicked, vile (Ar. P. *lā abālī*).
nuqro, silver.
nuwo, see *nowa*.

O.

oghoj, farsakh, i.e. about 4 miles' distance.
oghol, shelter for cattle.
oli, see *ali*, *alye*.
onin (v.), Pres. *inem*, to bring ; *halonin*, to take, lift ; *lonin*, to carry away.
opu, *op* uncle (mother's brother) (HS, 48, *āpp*, *āppeh*).
or, *ir* (=*hor*, 49 ?), fire (HS, 48, *ār*).
osh, *ish*, water mill.
ow water.
owetin (v.), Pres. *owezhem*, to throw, pour out.
owo, down ; West.

P.

pali, *poli*, *pahli*, (P. *pahlu*) side ; (prep.) near, by the side of.
palwar, fat, abundant.
parda, a fret, or stop on a stringed musical instrument (P.).
päykom, news (P. *payghām*).

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paz, cattle, sheep (HS, 56, *pas*).
peh kerin (1), to break legs (?).
per, *pir*, much, plenty.
per, bridge.
perin, *perrin*, *ferin* (v.), Pres. *perem*, to fly.
pesing, cat.
pesmon, *pesmom*, cousin, son of an uncle.
peshin, *peyshin*, *pishin*, foremost, at the head.
pichin (v.), Pres. *pichim*, to turn, twist.
pil, shoulder (HS, 57).
piren, the day before yesterday.
pirs kerin, to ask, question.
pizhder, porcupine.
poch, kiss.
pocha, skirt (HS, 55).
poin (v.), Pres. *poma*, to watch.
poli, see *pali*.
pon, wide, broad, plain (P. *pahn*).
poni, a sort of footwear.
por, part, portion, share.
porsu, rib (HS, 55, *pārsū*).
posh, after.
potin (v.), Pres. *pizhem*, to cook, bake, boil.
pun, mint grass (Khorasani P., lit. P. *pudāna*).

Q.

qaj, stork.
qamar, *kamar*, black, dark.
qaraqund, a sort of food, the same as *qurud*, *kashk*.
qarik, *kirik*, crow, raven.
qazo, anger (Ar. *ghaḍab*).
qarisin (v.), Pres. *qarisem*, to freez, to feel cold.
qege, sheep-flea.
qiriq, see *qariq*.
qiz, *qeyz*, *qiz*, daughter, girl (T.).
qochi, scissors.
qor, *kor*, kid.
qor, see *kor* (anger).
qotuq, sour milk (P. *māst*).
qulk, *qolk*, *qurk*, *kurk*, soft wool.
qum, *kum*, hat.
quqi, owl (?).
qwin, see *kwin*.

R.

rä, *re*, *ri*, *rre*, *rrey*, road, path.
raf, peak, hill top.
rand, see *rind*.
rash, *rashin*, black.

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ratin (v.), Pres. *rawem*, to go, run away (84).
rawiṣon, rowison, kiss.
re, see *rä*.
re, see *ri*.
reġawr, headman, P. *rīshsafīd*, T. *āqsaqāl*.
reston, riston, rope.
ri, re, face, beard (HS. 70, *reheh*).
ri, rüe, day, sun.
rind, riṇd, rund, rand, good, nice, strong, etc. (HS. 70).
riskat, permission (Ar. *rukhṣat*).
ritin (v.), Pres. *rizhem*, to pour out (HS, 70).
riwi, fox, jackal
riwi, intestines, bowels.
rizh, rizha, row, order (137).
rowison, see *rawison*.
ru, ri, rüe, sun, day.
rüin, bright, light.
run, oil, butter.
runishtin, see *nishtin*.

S.

sä, säk, sok, dog.
sakenin (v.), Pres. *sakenem*, to stay, remain.
sapat, basket.
sardor, headman of a tribe (P.)
sardore (P. *sardārī*), long overcoat.
sawo, for, for the sake of.
seṇg, peg of a tent (HS, 74).
serfa, table cloth (P. *sufra*).
sew, siw, apple.
sewek, light, easy (P. *subuk*).
sha, comb.
shäw, show, shuw, shiw, shew, night.
shawetin, shawtin (v.), Pres. *shawetim*, to burn; Caus. *shawetondin*, Pres. *shawetinem*, to light, to burn.
shef, shaft, pole, stick.
shew, see *shäw*.
shewon, shepherd.
shikh, witch, medicine man, diviner (Ar. *shaykh ?*).
shin, shun, shund, place.
shiw, slope, ravine.
shiw, same as *shäw*, q.v.; evening meal.
shiwishk, a sort of grass (P. *kushtar*).
shondin (v.), Pres. *shinem*, (Caus.), to send.
shüir, sword (HS, 75, *shūr*).
shun, shund, see *shin*.
shusha, glass (P. *shīsha*).
shushtin (v.), to wash.
si, siṇ, se, siẹ shadow (P. *sāya*).
si, side; towards (P. *sū*).

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sim, pus.
sing, see *seng*.
singe, breast.
sis, white, fair, pale (usually as a synonim of *buz*, q.v.).
sok, see *sä*.
sol, current, spat (Ar. *sayl ?*).
sor, cold (HS, 72, *sār*).
sportin, *isportin* (v.), Pres *sperum*, to entrust, hand over.
süür, *sor*, red, pink.
süürek, scarlet fever.
sul, shoe (HS, 73).
sumbil, moustache (P. *sabīl*).
sund, oath (?) (cf. HS, 73, *suen*).
suw, morning, also *suwaydo*.

T.

taj, *tazh*, coarse woolen homespun, used for making tents.
tajin, full, complete (?).
tandur, oven (P *tanūr*).
tan, *tane*, alone (P. *tanhā*).
tashi, hand spindle.
tawer, ax (P. *tabar*).
Tat, *Tot*, a Persian, as opposed to a Kurd.
tawo, spoilt, ruined, destroyed (P. *tabāh*).
tawshe, axe, used for chopping wood (P. *tīsha*).
tayloq, calf, young camel.
teftiq, soft wool.
tekhar, ass colt.
tere, see *turu*.
teron, falcon (T. *tarlān*).
tezh, see *tizh*; see *taj*.
tidho, from there.
tihim, *tim*, thirsty.
tip (187), band, party of horsemen.
tir, full, satisfied with food (P. *sīr*).
tiri, hailstone.
tisht, *tusht*, something, a little.
tizh, *tezh*, *tuizh*, *tuiz*, sharp, thin; sprout.
tol, bitter.
tori, *torye* (154), darkness.
tos, a sort of a weed.
Tot, see *Tat*.
Tozeki, Persian (adj.)=*Tājīkī*.
tuizh, *tuiz*, see *tizh*.
tukh, bead (Ar. *tauq*).
tushtir, kid, one year old (HS, 59, *tūshdīr*).
turu, *ture*, *tere*, grape, vine (HS, 59, *tūreh*).
tuw, sour milk (the same as Persian *māst*).

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U.

ujiq, fire-place, hearth (T. *ūjāq*).
urencha, clover.
urghon, blanket (T. *yurghān*).
urt, *urte*, *urti*, middle; amidst, within, between (T., cf. HS, 50).
ustu, neck (cf. HS, 48).

W.

waris, rope (?).
wajik, *wazhik*, crow.
wedho, *widho*, here.
wi, without; see *bi*, *bie*.
wishin (v.), Pres. *wishim*, to scatter.
worin, see *borin*.

Y.

yon, side (27).

Z.

zand, arm to the elbow.
zaṇg, stirrup.
zar, *zir*, yellow.
zärow, *zerow*, thin, graceful.
zawejin, married.
zawon, tongue.
zek, *zik*, abdomen, stomach.
zenho (?), probably for *zeminho* (16).
zhabä, overcoat (Ar. *jubba*).
zhaku, from where.
zhawro, from there.
zhen, woman, wife.
zhir, *zhüir*, under, below.
zhone, *zhuṇg*, knee (HS, 71, *zhenu*).
zhüir, see *zhir*.
zhunin, *zhonin* (117) (v.), to hasten, drive, hit (cf. *ajutin*).
zhuṇg, see *zhone*.
zir, midday (Ar. *ẓuhr*).
zir, see *zar*.
ziw, silver, money (HS, 72), cf. 179.
ziw, *zow*, river-bed, gorge, valley (West. Kurdish *zāb*).
ziwiston, winter.
zonin (v.), Pres. *zonem*, to know.
zow (102), see *ziw*.
zowo, *zuwo*, *zumo*, son-in-law.
zu, *zi*, soon, quickly.
zugur, see *chuqur*.

V. Specimens of Kurdish Writings.

A few specimens of Kurdish tristichs, as written by a literate Kurd, are here given. Figures refer to the numbers in

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the collection of specimens above. The helplessness of the writer with orthography is really remarkable.

120.

سر و دراو سر و دراه، جه عشقی ته بومه زراه،
مال که تونه جان د کراو (*sic*)،

122.

وان شـــوانا وان رویانا، خو ده جاوی مه نا کوی،
یار و ته ني را نا کوی،

123.

ورن دوّان قتـــار کنـــي، له باجکیران مقـل کني،
جلّه سرکیش جه سر کني،

124.

ور مال مـه و ساز که، طیرمه به بر و کراس که،
یا بده مه خا کراس که،

125.

از ایتي مه جه فه رسکي، اشک سیلـه دیخ اوسکي،
دلی مه و سول کسکي،

126.

یک تو به وی یکي ازم، چـــره ناک کاو پـه زه،
درد تـه کریـــه تـــازه،

127.

ازی دیمه چه مشهدي، سوا سریـــن له سپتـه،
ناو یـــار نوات جانـــه،

128.

شو روی از د جولی، بومه ریک به نکولی (*sic*)،
از عاشق پاچه قولینک (*sic*)،

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129.

عباسابـــاد و پاتختـــه، فاطمه خانم چه بد بخته،
آسمان دوره زمین سخته،

130.

هرکس یار مین هلکري، مارک و سـر دل بکري،
درمان مکن با به میري،

131.

لسر آو رو نیـــش تیه، دست روی خا شوش تیه،
سـو من را خا کشتـــي،

132.

مرار ترین رو له چیان، یکی بکیریم چه دو دیان،
یار قچـــک نارم رویان،

P.S.—I have to acknowledge my gratitude to Mrs. C. de Beauvoir Stocks for her revision of my English in this paper.

CALCUTTA.
The 18th July, 1926.

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Some Persian Darwish Songs.

By W. Ivanow.

A darwish, in his quaint attire, singing loudly in the bazar amidst a busy crowd, is quite a familiar sight in every Persian town. The songs he sings deal with Divine love, with praises to the Imams, with their sufferings, etc. Almost all of them are gems of Persian poetry, very carefully selected: well-known *ghazals*, *qaṣīdas* or *tarjī'bands* of Ḥāfiẓ, Sa'dī, Ni'matu'l-lah Walī, or belonging to some comparatively late poet, like Ḍiyā'ī, Nūr 'Alī Shāh, etc.

There are, however, songs which are also sung by the darwishes, which do not belong to the literary poetry of Persia, but are ordinary songs of the people composed on the same principles as popular quatrains, *taṣnīfs*, etc. They show the same disregard for official prosody, they use phonetic rhyme, which is no ryhme at all if the poem be written or pronounced according to the rules of literary Persian, etc. These poems are not very numerous as darwishes avoid them in order not to appear too rustic and uneducated. But the technique of their profession as beggars makes it necessary for them sometimes to use them, especially those which closely imitate the high-flown poetry.

In order to deal properly with these songs it is better to show in what particular performances they are sung. In accordance with the ancient customs and beliefs, the profession of beggar (*gadā*)[1] is regarded as objectionable. All darwishes are prohibited from begging—officially—except those belonging to the "*Khāksār*" or "*Ḥaydarī*" order. These do not treat their begging as ordinary begging, but regard it as a sort of collection of their dues, *ḥaqq-i-ṭalab*,[2] and the subsistence gained by this (*luqma-i-faqr*) they regard as lawful to them (*ḥalāl*). Begging in fact is their sole occupation, and is surrounded by different observances, superstitions, special ethics, etc. The initiates of higher degrees do not beg themselves,[3] as a rule, except when in

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[1] The term *gadā*, *gadā'ī* is always used in a derogatory sense. As applied to begging by darwishes, or by peasants of famine-struck villages, and others who are not professional beggars, but who are obliged to beg for only a short period of time, the term *parsā*, *parsāgarī* is used, e.g. *raft bā parsā*=started begging.

[2] The darwishes are guarding the world against calamity, *balā*; they *eat it*, whenever it approaches.

[3] They occasionally use a different method, by "sitting in the tent" at the gates of a city, or at the door of the house of a wealthy man.

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very stressed circumstances. All begging is done by the newly initiated (*kūchik-abdāl*), who are obliged to bring a certain amount to their *murshid* daily.[1]

A darwish setting out to beg must be dressed in full uniform, having his *pūst-i-takht*, or skin for sitting on, over his shoulders, a hatchet, *tabarzīn*, in his hand, and especially the *kashkūl*, or begging bowl, into which donations are placed.[2] He must not sing unless his voice is regarded (at least by himself) as pleasant to others. He must not be a nuisance to others in any way, must not address anyone in particular, but create the illusion of alms being given voluntarily. Those darwishes who cannot sing may go along the shops of the bazar, silently putting down a leaf of a tree, or a flower, etc., and wait for alms. Others say something during this performance. I knew a darwish at Sabzawar who whilst walking unceasingly repeated: *bä guftugu miräwäm, bä khandägu migīräm*, i.e. "I am talking as I walk, and I smile as I take (the alms)."

When the darwish comes to the bazar, he stops at the entrance, in the middle of the street, and then begins to sing. After this he can take not more than "seven steps" (*haft qadam*) at a time, doing this without undue hurry, finishing his song before moving on, not singing when he walks, neither looking round, nor talking to his friends; in short, acting the ecstatic devotee, entirely absorbed in his religious devotions. It may be added that the flow of alms is usually very slow, and a darwish has to spend hours in touring round before he collects anything appreciable, so that his dignified movements are primarily due to the methods of saving labour, worked out by long practice.

In order to attract public attention to his appearance in the bazar he sings something as follows:—

Äz äyne Ali didäyi mo bino shud
äz lome (sic) alif lisone mo guyo shud
där yoyi Ali nazar ku äy ahli yaqin
z'un nur Muhammad-u Ali päydo shud.

In such cases the sum is usually specified, and the darwish will sit in his tent until his desire will become "green," *to niyyät-äsh sabz shäwäd*, i.e. until he gets what he asks for. Sitting in the tent (*chādir zadan*) is accompanied by very complicate symbolical and magic rites, special prayers, abstinence, etc., and is not permitted to beginners.

[1] Usually this period of service is "1001" days, just over three years, but a darwish may accelerate his spiritual progress if he gets the cash, due for this period, within a shorter time.

[2] This rule is often disregarded because these implements of the darwish are often used as a security against small loans due to lean days in his difficult profession. *Darwīsh kāmil na bāshad tā chīzī az ū lang na bāshad*=the darwish will not be perfect unless he is short of some of his implements. *Kashkūl* is regarded as possessing special magic powers, and is often kept in the houses of well-to-do people to feed the sick out of it. Very often such *kashkūls* are ornamented with silver and jewels.

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از عین علي ديدهٔ ما بينا شد، از لام و الف لسان ما گويا شد،
در يائی علي نظر کن ای اهل يقين، زان نور محمد و علي پيدا شد،[1]

i.e. From the *'ayn* of 'Alī our eyes become able to see,
from the *lām* and *alif* our tongues get the power of speaking.
Look into the letter "*ī*" of the word 'Alī, o thou, who believest only the obvious!
From that light Muḥammad and 'Alī have appeared.[2]

Then the darwish asks the permission of the public to proceed with his singing:—

Rukhsäti khohäm bä ishqä we sälom
to kunum bär ruhe i jam'e tämom
ahli ma'no hamä yak jo jam' ä
bär yäki ishq ä bär jumlä selom.
Sälom kun ki salomät boshi
zire alämi sawze Muhammad boshi.[3]

رخصتی خواهم به عشقت و سلام، تا کنم بر روی اين جمع تمام،
اهل معنی همه يک جا جمع اند، بر يکی عشق است بر جمله سلام،
سلام کن که سلامت باشيد، زير علم سبز محمد باشيد،

i.e. I ask permission for the sake of Thy love and blessing,
in order to make (it) complete before this community.
The participants in the "knowledge" are all together,—
love belongs to One, blessing to all.
Greet (all, saying): be you in good health,
abide under the green banner of Muḥammad!

He may also unequivocally encourage the donors, with a song which is purely popular, and may be regarded as a "joke," to break up the tension of the sublime speculations of these introductions.

Zikre shudäm ki mashghul
du pul bändoz tu kashkul
zikre Khudo Rasul ä
har chi bedeyi qabul ä.

---

[1] This is a paraphrase in literary Persian, in which the terms of lit. Persian are mechanically substituted for the expressions of the song. It must be noted that in such paraphrases the metre, rhyme, etc., may be irregular and incorrect, due to altered pronunciation.

[2] The expression '*ayn*' is the name of the first letter in the word 'Alī, but it also means the "eye," alluded to here in the word-play. The *lām* and *alif* are the first word in the formula "there is no god except Allah." "That" light is an allusion to the "*nūr-i-yaqīn*.".

[3] Such additional lines are required by the change of the tune to which they are sung. They may be added to any one of these songs.

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(به) ذکر شدم که مشغول، دو پول به انداز تو کشکول،
ذکر خدا رسول است، هرچه بدهی قبول است،

i.e. As I become busy with singing (*dhikr*),
throw two coppers into the begging bowl.
The mention (*dhikr*) of God is the Prophet.[1]
Whatever thou givest, will be accepted.

Then follows a "*bismilla*," the usual formula, "in the name of God, etc.," which must be repeated at the beginning of every undertaking. There are several versions of it; they are probably very numerous. They are sung not only at the beginning of the darwish's "working day," but sometimes before every new song.

Äz nome khushät ädo kunum "bismillo"
hasti tu Alloh-u nist mislät billo
pursän ägär zi quwätät miguyum
lo hawla we lo quwäta illo bello.

از نام خوشت ادا کنم بسم الله، هستي تو الله و نیست مثلت بالله
پرسند اگر ز قوّتت میگویم، لا حول و لا قوّة الا بالله،

i.e. I will say "*bismilla*" with the help of Thy blessed name.
Thou art God, there is no one like unto Thee, by God!
If they ask as to Thy might, I will say:
"there is no might and no power except from God!"

Another "*Bismilla*":

"Bismillo" mikhunäm Khudoro
zi mushte khok Odäm sokht moro
zi "bismillo" chizi nis behtär
nehodum toji "bismillo" bär sär.
Ajab tojist in toji ilohi
beneh bär sär berow har jo ki khoyi.[2]

بسم الله میخوانم خدا را، ز مشت خاک آدم ساخت مارا،
ز بسم الله چیزی نیست بهتر، نهادم تاج بسم الله بر سر،
عجب تاجیست این تاج الهي، بنه برسر برو هرجا که خواهي،

i.e. I sing "*bismilla*" to God,
who created Adam for us from a handful of earth.
There is nothing better than "*bismilla*,"

---

[1] Apparently because it is sufficient to mention the Prophet to remember also God.

[2] The word "crown," *tāj*, also means the darwish felt cap. Very often *dhikrs* and even long prayers are sown round with silk. *Sar* means not only the head, but also the beginning. The expression: I have put the crown of "*Bismilla*" "*on the head*," may mean—"on the beginning of the undertaking," in this case—the begging.

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so I have put the crown of the "*bismilla*" upon the head.

A wonderful crown is the divine crown,—
put it on thy head and then go wherever thou wantest.

Another "*Bismilla*":

"*Bismillo*" *wirde zäbonäm bä har adab*
män kalpe osetone tu hastum yo Ali madad
khohum ki där du wakht bä färyode mo räsi
awäl där däme imomat diyum där tahe lahat.

بسم الله ورد زبانم به هر ادب، من کلب آستان تو یا علي مدد،
خواهم که در دو وقت بفریاد ما رسي، اوّل در دم امامت دیوم در ته الحد،

i.e. "*Bismilla*" is the prayer in my mouth, in every manner.
I am the dog at thy threshold, o 'Alī, help!
I wish thee to answer my appeal on two occasions,—
first (when the trumpets of thy arrival) as an Imam will be blown, the second—at the bottom of the grave!

The artlessness of the composition is the more apparent as these songs try to imitate in their contents the standards of the high-flown poetry. Besides these pieces, there are many short *dhikrs*, some in verse, others in-rhymed prose, which are used to fill up a pause between two parts of a long poem, or to separate one poem from another. In addition to these there is a profusion of exclamations as *Yo Hu*,—O He!, or *Yo Ali madad*=O 'Alī help!, or *Ḥaqq dust illo'l-lo*=The Truth is the friend, there is no deity besides Him!, or *bär qäror boshäd*=be it strong! etc.

Some specimens of shorter *dhikrs* may be given here:

Mäkkä Mädinä bäytu'l-lo
dine Näbi sala'l-lo
Hu Haq illo'l-lo (*bis*).

مکه و مدینه است بیت الله، دین نبي صلی الله،
هو حقّ الا الله،

i.e. Mekka and Medina are the house of God.
The faith of the Prophet, God bless him,
is "He is the Truth, there is no god beside Him!"

Another:

Haq bä haq dod miräsäd yo Hu
wahduhu lo ilaha illo Hu.

حقّ بحقّ داد میرساند یا هو، وحده لا اله الا هو،

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i.e God gives to the righteous what he deserves,
He is One, there is no god beside Him !

Another :

Awäläm khok, okhiräm khok äs
Odem äz khok nure eflok äs.

اوّلم خاک است آخرم خاک است ، آدم از خاک نور افلاک است ،

i.e. My origin is dust, my end is in the dust,
but Adam (=man) of dust is the light of heaven.

Another :

Khush dirakhtis där miune behisht
samärosh lo ilaha illo Hu
samärosh lo shorika lahu.

خوش درختیست در میان بهشت ، ثمرهاش لا الـه الا هـو ،
ثمرهاش لا شارک له ،

i.e. There is a beautiful tree in the middle of Paradise,
its fruits are " there is no god except Him,"
its fruits are " there is no companion unto Him. ! "

There are, indeed, numerous *dhikrs*, but those given above are sufficiently typical of their kind. The Khorasani accent in the text of these songs is due to the fact that they were written in Southern Khorasan, after the dictation of a local darwish. It must be noted that he tried to follow as much as possible the rules of literary language, especially in the terminations which in the Khorasani are frequently omitted, if consonants.

Calcutta, 9-1-1928.

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Jargon of Persian Mendicant Darwishes.

By W. Ivanow.

In my papers dealing with the so-called Persian Gypsies,[1] and with the jargon of some Shi'ite sects of the fifteenth or sixteenth century,[2] I have already given an analysis of the elements of which this secret "language" is composed. For students of the Gypsy problem it may be useful to note also some peculiarities of the conventional code used by the wandering darwishes of Persia. A brief list of their terms is here given, and although it contains a comparatively small percentages of expressions which resemble the Gypsy words of supposed Indian origin, the general character of their jargon is undoubtedly identical with that used by Gypsies all over the country. It is obvious, that the darwishes, being more concerned with religious matters, and more conversant with Arabic as the vehicle of Muhammadan religious thought, would more freely borrow Arabic terms for their conventional code than the poor and entirely illiterate country craftsmen, the Gypsies. In other respects the close relation of the two jargons is quite apparent, and one may suppose that this connection is not due to the borrowings by the darwishes from the code of the Gypsies, but to the fact that both codes are merely modifications of a third one, namely the secret jargon of thieves, brigands, beggars, etc. There is no doubt that such a thieves' jargon has existed for centuries. The darwish terms which may be occasionally picked up in Sufic and hagiological Persian literature appear to be many centuries old.

The present list was compiled in Birjand, Eastern Persia, from informtion supplied by a Khāksārī darwish, Raushan 'Alī Shāh, originally from Shahr-i-Bābak (in the province of Kirman). For some time he acted as a secretary to a band of brigands on the Yazd-Kirman road, who kept him, as he says, as a prisoner. He specialised in black-mail and the negotiations connected

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[1] *On the language of the Gypsies of Qainat*, Journal of the Asiatic Society of Bengal, new series, vol. X, 1914, pp. 439–455. *Further notes on the Gypsies in Persia*, ibid., vol. XVI, 1920, pp. 281–291. I refer further on to the first paper as I, and the second as II. Readers should be warned that the first paper was not read by me in proofs, due to communication being upset at the outbreak of the War; it is full of misprints. They have all been corrected in my second paper, on pp. 289–291.

[2] *An old Gypsy-Darwish jargon*, Journ. Asiat. Soc. Bengal, new series, vol. XVIII, 1922, pp. 375–383. I refer to this paper as III.

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therewith under the cloak of his status as a devotee. He was particularly well qualified also in begging, swindling, and other forms of rascality.

The darwishes do not use in their jargon the numerous sufixes used by Gypsies. Their verbs are mostly composite, as: *dak shew*=stand up; *guftol* (literary Persian *guftār*) *ku* say; *khundor shew*=read, etc. But occasionally there are traces of special verbal stems: *āz*, to take, *e.g.*, *bioz*=take (it). The root *pit* is apparently of Indian origin,—*bepit*, drink (it), *bepitim*, we will drink, etc. *Sik*—look. Imp. *besik*. Imperative "sit" is rendered with *ben* or *henish* (the latter apparently belongs to some dialect of N. W. Persia). Strange is *midella*=he is afraid (Lit. Pers. *mī-tarsad*, of which it may be a corruption). Also *kushshum*=hush! (rendered by Persian *hīch magū* !).[1] It may be added that the darwishes often hide the meaning of their words by splitting them up into syllables, between which some quite meaningless syllable, or word is inserted. It is the same as the so-called *zabān-i-zargarī*, or *Yazdī*, the difference consists only in the inserted syllables.

In the following list of words an endeavour is made to trace the origin of each of them.

azäk, boy, son.
boluki, branch, leaf of a tree (apparently corrupted from Pers. *barg*).
dak, *dakh*—good, right, straight, clean, etc., a Gypsy word, cf. I, II, III.
danew, *denew*, *deneb*, woman, wife, a Gypsy word, see I, II, III (p. 379).
dogha, man.
dukhloj, girl, daughter (Gypsy, see I and II).
geher, sister (Lit. Pers. *khwāhar*).
gerze, darwish (used also by Gypsies, cf. I).
gure, horse (Gypsy, see I, II).
häzä, young (?), cf. above *azäk*.
hukka, water pipe, *qalyān* (Indian).
kafanok, shirt (Arab. *kafan*, shroud, and suffix *-ok*).
kanak, wheat (?).
kapar, donkey.
khateki, prayer, written as a charm (Arab. *khaṭṭ*, with Pers. suffixes *-ak*, and *-ī*).
khit, bad.
kowro, bread.
kurum, an important man, governor, judge, etc.
lahmegi, meat, flesh (Arab. *lahm*, Pers. suffixes *-ak* and *-ī*).
layl, night (Arab.).

[1] The inflections, formations of different tenses, etc., are, both in Gypsy and in this darwish jargon, identical with those in colloquial Persian.

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machal, oil, butter.
maki, old.
moi, water (Arab.).
nalegi, slipper, shoe (Arab. *na'l*, and the same Pers. suffixes).
parak, cow.
pereki, bird, hen (obviously from Pers. verb *parīdan*, to fly).
quruki, butter (?)
riqo, son, boy (?)
sabzagi, tree (Pers. *sabz*, green, and suffixes *-ak* and *-ī*).
safideki, paper, white (Pers. *safīd*, and the same suffixes).
selote, a divine, priest (Arab. *ṣalāt*, prayer).
shafteki, sugar.
shahlo, good.
shams, sun, day (Arab.=sun).
talkhaki, tobacco, opium (Pers. *talkh*, bitter, etc.)
telis, Persian coin *tūmān*.
wodi, house (Arab. *wādī*, valley).
yakan, money, silver.

Calcutta, 11*th April*, 1928.

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The Lakṣmaṇa Sambat.

By Sir George A. Grierson, O.M.

May I add the following supplement to Mr. Pramatha Nath Misra's interesting article on the Lakṣmaṇa Sambat on pp. 365ff. of Vol. XXII, 1926, of the *Journal and Proceedings of the Asiatic Society of Bengal*. Mr. Misra's document No. 3, on p. 369,—the grant of King Śiva Siṁha of Mithilā—is almost certainly a modern forgery. I have shown this in a short article on p. 96 of Vol. LXVIII, Part I (1899) of the *J.A.S.B.*, and I need not repeat the proof here. A facsimile of the grant will be found on Plate iii of the *Proceedings* of the Society for 1895.

I may add that my original article, referred to by Mr. Misra was on p. 190, not 151, of "*The Indian Antiquary*" for 1885.

George A. Grierson.

Camberley,
April 30, 1928.

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NOTICE.

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General Secretary :—Johan van Manen, Esq.
Treasurer :—Baini Prashad, Esq., D.Sc., F.Z.S., F.A.S.B.
Philological Secretary :—Mahāmahopādhyāya Haraprasad Shāstrī, C.I.E., M.A., D.Litt., F.A.S.B.
Joint Philological Secretary :—Shams-ul-'Ulamā Mawlawī Hidāyat Hosain, Khan Bahadur, Ph.D., F.A.S.B.
Natural History Secretaries. Biology :—Lt.-Col. R. B. S. Sewell, M.A., M.R.C.S., L.R.C.P., F.A.S.B., F.L.S., F.Z.S., I.M.S.
Physical Science :—C. V. Raman, Esq., M.A., D.Sc., F.R.S., F.A.S.B.
Anthropological Secretary :—Rev. P. O. Bodding, M.A., F.A.S.B.
Medical Secretary :—Lt.-Col. R. Knowles, B.A., M.R.C.S., L.R.C.P., F.A.S.B., I.M.S.
Library Secretary :—Lt.-Col. N. F. Barwell, M.C., M.A.

Other Members of Council.

Hon'ble Mr. Justice C. C. Ghose, Kt., Barrister-at-Law.
Sir B. L. Mitter, Kt., M.A., B.L., Barrister-at-Law.
Suniti Kumar Chatterji, Esq., M.A., D.Litt.
J. H. Lindsay, Esq., M.A., I.C.S.
B. De, Esq., M.A., I.C.S. (retired).
H. E. Stapleton, Esq., M.A., B.Sc., I.E.S., F.A.S.B.

ASIATIC SOCIETY OF BENGAL.

PRIVILEGES OF ORDINARY MEMBERS.

(*a*) To be present and vote at all General Meetings, which are held on the first Monday in each month except in September and October.
(*b*) To propose and second candidates for Ordinary Membership.
(*c*) To introduce visitors at the Ordinary General Meetings and to the grounds and public rooms of the Society during the hours they are open to members.
(*d*) To have personal access to the Library and other public rooms of the Society, and to examine its collections.
(*e*) To take out books, plates and manuscripts from the Library.
(*f*) To receive *gratis* copies of the *Journal and Proceedings* and *Memoirs* of the Society.
(*g*) To fill any office in the Society on being duly elected thereto.

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यह पुस्तक वितरित न की जाय
NOT TO BE ISSUED

Proceedings
of the
Asiatic Society of Bengal
for 1926.

[*Journal and Proceedings of the Asiatic Society of Bengal.*]

यह पुस्तक वितरित न की जाय
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Proceedings, Asiatic Society of Bengal, 1926.

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PROCEEDINGS OF THE ANNUAL MEETING, 1927.

The Annual Meeting of the Asiatic Society of Bengal was held on Monday, the 7th February, 1927, at 5-30 P.M.

Present :

HIS EXCELLENCY THE RIGHT HON'BLE VICTOR ALEXANDER GEORGE ROBERT BULWER-LYTTON, EARL OF LYTTON, P.C., G.C.I.E., Governor of Bengal, Patron.

G. H. TIPPER, ESQ., M.A., F.G.S., M.I.M.M., F.A.S.B., President, in the Chair.

Members :

Agharkar, Dr. S. P.
Ahmad, Khan Bahadur Kamaluddin
Ahmed, Mr. M.
Ali, Mr. A. F. M. Abdul
Bagchi, Dr. P. C.
Bannerjee, Mr. A. C.
Bannerjee, Mr. M. N.
Barwell, Lt.-Col. N. F.
Becker, Mr. J. N.
Bery, Mr. A. R.
Bery, Mr. P.
Bhandarkar, Dr. D. R.
Bhaskaraiya, Mr. C.
Biswas, Mr. Kalipada
Bose, Mr. M. M.
Brahmachari, Dr. U. N.
Brown, Mr. Percy
Chakladhar, Mr. H. C.
Chakravarti, Mr. N.
Chatterji, Dr. S. K.
Chaudhuri, Dr. B. L.
Chokhani, Mr. J. N.
Chopra, Mr. B. N.
Christie, Dr. W. A. K.
Collet, Mr. A. L.
Das-Gupta, Mr. H. C.
Datta, Mr. H. N.
De, Mr. B.
De, Mr. K. C.
Deb, Raja Kshitindra
Deb, Kumar H. K.
Dikkers, Mr. F. G.
Dikshit, Mr. K. N.
Doxey, Mr. F.
Fermor, Dr. L. L.
Fleming, Mr. Andrew
Ghose, Mr. T. P.
Ghuznavi, Hon'ble Mr. A. K.
Ghuznavi, Mr. A. H.
Ghose, Hon'ble Mr. Justice C. C., Kt.
Guha, Dr. B. S.
Gupta, Mr. S. N.
Hobbs, Mr. H.
Hora, Dr. S. L.
Hosain, Dr. M. Hidayat
Hubert, Mr. Otto
Huq, Prof. M. Mahfuzul
Insch, Mr. Jas.
Iyer, Rao Bahadur L.K.A.
Jain, Mr. Chhotelal
Jameson, Mr. T. B.
Knowles, Major R.
Law, Dr. S. C.
Lindsay, Mr. J. H.
Manen, Mr. Johan van
Mehta, Mr. R. D.
Miles, Mr. W. H.
Mitra, Mr. A. C.
Mitra, Mr. S. K.
Mitter, Mr. B. L.
Mitter, Mr. B. P. D.
Mitter, Hon'ble Mr. Justice Dwarkanath
Mitter, Mr. K. N.
Mookerjee, Mr. J. N.
Mookerjee, Mr. P. K.
Mookerjee, Sir R. N.
Mookerjee, Mr. S. C.
Mukherjee, Mr. J. N.
Mukherjee, Mr. Saradindoo
Nag, Dr. Kalidas
Pascoe, Dr. E. H.
Pilgrim, Dr. G. E.
Raman, Dr. C. V.
Rao, Mr. H. S.
Ray, Mr. B. B.
Ray, Mr. H. C.
Roy-Choudhuri, Mr. M. N.

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Sarbadhikari, Sir D. P.
Sarkar, Mr. Ganapati
Seth, Mr. Mesrovb Jacob
Sewell, Major R. B. S.
Shastri, MM. H. P.
Sondhi, Mr. Gautam

and several others.

Visitors :

Allart, Mrs. D.
Bake, Mr. A. A.
Bannerjee, Mr. A. C.
Bery, Mr. A. K. D.
Bhattacharya, Bhabatosh
Bonnerjee, Mrs. Amia
Bose, Mr. S. P.
Brinkman, Mr. F. L.
Brinkman, Mrs. F. L.
Chakravarti, Hon'ble Mr. B.
Chakravarti, Mr. C.
Cowan, Mr. J. M.
Das-Gupta, Mr. S. C.
Dutt, Mr. G. S.
Ghose, Mr. N. C.
Ghosh, Mr. P. N.
Ghosal, Mr. U. N.
Jenkins, Mr. W. L.
Knight, Mr. P.
Kyles, Mr. D.
Leser, Mrs.
Lindsay, Mrs. J. H.
Miles, Mrs. W. H.
Miller, Mr. W. H.
Mohammed, Mr. G.
Nag, Mrs. K.
Neogy, Mr K. M.
Paul, Mr. K. S.
Pennel, Mr. G. D.
Rasmuss, Mr. C. R.
Rasmuss, Mrs. C. R.
Ray-Chaudhuri, Mr. K. C.
Sarma, Sir B. N.
Sen, Mr. P. C.
Singh, Mr. B. R.
Sinha Sarma, Mr. S. C.
Siriwardene, Mr. P. P.
Shah. Mr. P. G.
Sheldon, Mrs.
Squire, Mr. F.
Staargaard, Mr.
Staargaard, Mrs.
Urquhart, Dr. W. S.
Walsh, Rt. Rev. H. Packenham
Walisingha, Mr. Deva Priya.
Wiggitt, Mr. J. H.

and many others.

The President ordered the distribution of the voting papers for the election of Officers and Members of Council for 1927, as well as the voting papers for the election of Ordinary Fellows proposed by Council, and appointed Dr. L. L. Fermor and Mr. B. N. Chopra to be scrutineers.

The President also ordered the distribution of copies of the Annual Report for 1926 and called on the General Secretary to make a few remarks upon it.

The Annual Report was then presented. (See page xxii.)

At 5-55 p.m , the President vacated the Chair and invited Mr. B. De to occupy it during his absence from the room.

The President, the Treasurer and the General Secretary then left the meeting room to receive His Excellency, the Earl of Lytton, Governor of Bengal, Patron of the Society, at the entrance of the building.

On the arrival of the Patron at 6 p.m., the President introduced the Council to him and thereupon addressed to him the following words of welcome :

"In the name of the Society, I bid your Excellency welcome and would ask you to take charge of our proceedings."

After thus welcoming the Patron, the President invited him to occupy the Chair.

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The Patron called upon the retiring President to read his Annual Address. (See page v.)

The retiring President called upon the scrutineers to report and announced the results of the election of Council. (See page xiv.)

The retiring President gave place to the President for 1927, who thanked the Society briefly as follows :—

"On behalf of the new Council, I thank the Members for electing us, and on my own behalf, I thank the out-going Council for the honour they have done me in nominating me as President."

He then invited the Patron to address the Society.

The Patron then addressed the meeting. (See page x.)

After the reading of the Patron's address, the President for 1927, on behalf of the Society, thanked the Patron for his interesting address. He regretted his inability to give an extempore appreciation of it as he suffered from a well-known attribute of the elephant which was not included in His Excellency's enumeration, a certain lack of nimbleness. He would, however, thank his Excellency for the handsome appreciation of the Society's work and of the devotion and energy of its General Secretary to whom so much of its prosperity was due. His Excellency's endorsement of the Society's policy of increasing endowments to meet maintenance charges was very welcome; coming as it did from an administrator accustomed to meet all expenditure from current revenue it carried all the more weight.

He had much pleasure in proposing a vote of thanks to His Excellency for the entertaining and eloquent address.

The vote of thanks having been adopted by acclamation, the President for 1927 made the following announcements :

Papers from four candidates had been received in competition for the Elliott Prize for Scientific Research for the year 1926 and the Trustees had judged the papers of one candidate deserving of the award.

The Elliott Prize for the year had accordingly been awarded to Dr. Bidhubhusan Ray, for meritorious publications on the subject of Physics and the President requested the Patron to bestow the medal on the recipient.

The Patron then handed over the medal to Dr. Bidhubhusan Ray.

On report of the Scrutineers, the following candidates were declared duly elected Ordinary Fellows of the Asiatic Society of Bengal.

1. Major R. Knowles.
2. Mr. Johan van Manen.
3. Dr. B. Sahni.
4. Mr. A. C. Woolner.

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After these announcements, the President for 1927, declared the Annual Meeting to be dissolved, but invited the guests to examine a collection of exhibits. The retiring President and the incoming President conducted the Patron to examine the exhibits. (For the descriptive list of the exhibits, see page xv.)

At 7 p.m., the Patron left the meeting conducted by the President for 1927, after which an Ordinary Monthly Meeting was called for the transaction of business by Members, whilst the visitors inspected the exhibits.

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ANNUAL ADDRESS, 1926-27.

YOUR EXCELLENCY, LADIES, AND GENTLEMEN,

It is customary for your President at the Anniversary Meeting to bring before you those matters of importance which have happened to the Society during the past year.

I may perhaps preface my remarks by saying that I have for the greater part of the year been an absentee. Reasons of health made it imperative for me to leave India last May and since my return in November the exigencies of the service to which I belong have necessitated my absence from Calcutta since December.

In this country of officiating appointments the lesson that no man is indispensable is early learnt, and the work of the Society has been efficiently carried on by the senior Vice-Presidents and the Council you elected last year.

His Excellency the Viceroy and Governor-General paid a visit to the Society on the 22nd December last and he has graciously consented to become Patron of the Society, thus continuing the long line, from Warren Hastings to the present day, of Governors-General who have held office as Patrons.

It is a matter of personal satisfaction that I am able to announce that the number of members has increased to 552 and is now greater than at any other period of the Society's history. The previous highest number was in 1912, when I had the privilege of being Honorary General Secretary. I am aware that these are mere coincidences but it is pleasant to have been the victim of them. I am not convinced that numbers merely, gratifying as these may be, form the best criterion for assessing the prosperity of the Society. The result may be due to enthusiastic propaganda by a few members. Our turnover of members is too great, many names remaining on our lists for short periods only. This seems to indicate that our activities are not always of the right character. Another and perhaps better way of judging our prosperity is by the number and quality of the papers submitted for publication. During the year the number has increased and I think the quality has been fully maintained. While I am speaking of papers, I may be permitted to point out that the condition in which papers are sent in often leaves a great deal to be desired. This throws a great burden on the General Secretary and Sectional Secretaries. Papers should be prepared so that they may be sent at once to the printers and authors should remember that corrections and additions made in the proofs are a source of additional expense to the Society. If an author considers his paper worthy of publication, it is surely worth a little extra trouble in preparing it for the press.

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So long as the Society exists, the memory of our illustrious founder is hardly likely to be forgotten, but his name has never been perpetuated by the foundation of any prize in his honour until this year, when in July, Dr. Brahmachari made over to the Society investments of the face value of Rupees three thousand, the accumulated interest of which should be used every few years for the presentation of a gold medal, to be called the "Sir William Jones Gold Medal," for meritorious work in literature and in science (including medicine) alternately. As the generous donor has suggested that the medal shall be awarded for work done in Asia, the conditions under which the award is made require careful consideration. Needless to say this gift has been gratefully accepted by the Council on behalf of the Society.

At the last Annual Meeting I remarked that our Library ought to be one of the great assets of the Society in attracting new and keeping old members. This question was forcibly brought to the attention of the Council by the generous action of our Honorary Treasurer, Dr. Hora, and a sum of approximately three thousand rupees was subscribed by members of Council for library purposes and an appeal has also been made to the general body of members. The idea brought forward by Dr. Hora and appealing to me very strongly, was that this money should form the nucleus of a fund which should be allowed to accumulate, with such additions as may be made to it from time to time, until the interest amounts to a figure of practical value to be used for library purposes. I am fully aware that this is building for posterity. Yet the Society is to-day 143 years old and there is no apparent reason why it should not last for another 140 years. Some of you may think that it would be better to spend the money subscribed on the immediate needs of our Library. As the appeal issued by the Council is still open for sympathetic reception, preferably coupled with tangible results, I propose to lay before you a few ideas on the difficulties experienced and expenses incurred by a library of a learned institution. In choosing this subject I know that I am addressing an audience of librarians, but a private library is on quite a different footing. A wise man of old, apparently a librarian, once said "Much study is a weariness to the flesh and to the making of books there is no end." What would have been his remarks at the present I am unable to say.

The Library of this Society consists at the present day of approximately 100,000 volumes and grows at the rate of 500 volumes a year. It is therefore obvious that a considerable area of the Society's building must be allotted to the library and also provision made for future expansion. When this building was renovated, the floors of the side rooms were specially strengthened. The wise policy of installing steel

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shelving has provided extra space and provision has thus been made for library expansion for some years to come.

The yearly increase of books is due roughly to three causes, donations from members and others interested in our work, acquisitions made from the library fund, varying from year to year, and exchange with other learned societies. The last are usually serials, a serial being defined as a publication appearing at intervals to which there is no apparent end in sight. Our own Journal is a serial.

These books are of all sizes, from duodecimo to elephant folio; of all kinds of paper, and in all kinds of binding from paper to morocco. Some are illustrated by plates. In fact, they are of all classes and conditions. Before these books can be placed on our shelves, they must be stamped and slips prepared for the card index. Serials must be checked to see that numbers are consecutive. Many of them require to be bound and the binding of the serials must conform with that previously used.

It seems to be a general assumption that once books are placed on the shelves there is no further need to worry. This is quite mistaken. It is after the books are placed on the shelves that the troubles of the librarian commence. In this country there are three menaces to books which have constantly to be contended with, dust, climate and insects.

I need not enlarge on the action of dust. It is essential that books should be kept clean. Dust works into the binding and between the leaves. It is unpleasant also to handle a book with a nice thick layer of dust on the top. It is fairly obvious that the mechanical handling of a large number of books is a matter of expense and of continually increasing expense.

The climate of Calcutta is not ideal for books. You are all aware of its variability, from extremes of dryness to extremes of moisture. This variation is one of the chief causes of deterioration in certain types of paper, the heavily adulterated and doctored papers. Deterioration cannot be absolutely prevented but it can be delayed by exposing books to the air. For this also it is necessary for the books to be taken out of the shelves. The paste and gum which are used in binding also deteriorate and this is very often helped by the peculiar methods employed by the average "duftri" when dusting.

All in this room must be well acquainted with the depredations caused by insects among books, the neat circular hole of the borer insects, the fanciful pattern eaten out of a certain class of bindings by young cockroaches and beetles. Luckily in this library we have almost entirely got rid of the old wooden bookcase with its glass doors that never fitted, a repository for dust and with cracks and crannies in which insects could lurk with impunity. Steel shelving does not provide a home for insects and the books are open to the air. The attacks of fresh insects

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can be combated by the use of a poisoned paste during binding, keeping books clean and by volatile insecticides. Our predecessors used "nim" leaves and various powders. It may be asked whether, with these means at our disposal, it is not possible to rid our books entirely of insects. It ought to be possible in time but we possess many old books and our building is an old one. Vigilance should never be relaxed.

Let us assume that our books are properly bound, clean, and free from insects. It is a good collection but it lacks the essential factor which will bring it into touch with our members and particularly those away from Calcutta, an up-to-date catalogue. I do not wish to infer that the collection is entirely uncatalogued. There is a catalogue issued some years ago but it is an author's catalogue only and it suffers from incompleteness. In these days of specialisation no catalogue can be too complete, either as regards author or subject. A complete catalogue would not be confined to printed books only and should include serials. Such work is of a special character and requires a more than nodding acquaintance with most European and Eastern languages. A supplement should also be published at the end of every five years. It represents an ideal to be sought after, so that all our members may be fully aquainted with, and kept informed of, the contents of the Society's library.

No sermon can be counted complete without a moral. The moral is that the appeal on behalf of the Library is and always will be open to response by substantial donations. Some of you may say that it is the duty of the Council to allot funds from the Society's income to put our Library into good order. The Society certainly is financially sound, thanks to the foresight of our predecessors who founded the Permanent Reserve, but the income of the Society is barely sufficient for its needs. It is one of the few Societies I know which has not raised its entrance fee and subscription since the war, and I hope it never may have to do so.

To-night we meet with a sense of impending loss. This is the last occasion on which we shall have the privilege of hearing His Excellency, the Governor of Bengal, at our Annual Meetings. During the period he has been at the head of this great Province, he has shown his whole-hearted appreciation of every scientific, literary and artistic effort. His presence at our Annual Meetings and the addresses he has delivered have been a source of encouragement, and have, I am convinced, contributed materially to our prosperity. We hope that he will remember the Asiatic Society and take an interest in our future. In order that the links forged during the past years may not be entirely severed, I would ask him to consent to be one of our Honorary Fellows.

No presidential address would be complete without a reference to our Secretary, Mr. Johan van Manen. His whole-

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hearted devotion to the interests of the Society no words of mine can adequately describe.

To-night I resign my office. I have very greatly appreciated the honour you conferred upon me a year ago. I hope to hand over my responsibilities to a personal friend, an old member of the Society, who has served it in many capacities, a member of the service to which I belong, a distinguished chemist and mineralogist, and one who will work for the interests of the Society, Dr. Christie.

G. H. TIPPER.

7th February, 1927.

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PATRON'S ADDRESS.

SPEECH BY HIS EXCELLENCY LORD LYTTON, GOVERNOR OF BENGAL, AT THE ANNUAL MEETING OF THE ASIATIC SOCIETY OF BENGAL ON THE 7TH FEBRUARY, 1927.

DR. CHRISTIE, LADIES AND GENTLEMEN,

I am afraid that all my speeches from now onwards until I finally disappear from among you must be variations of the one note of farewell. This is the fourth occasion on which you have honoured me with an invitation to your annual meeting and it is also the last time that I shall have this privilege. This is not my final leave taking with the members of your Society as you have kindly invited me to attend an "At Home" on an afternoon in March. But there will be no speeches on that occasion and this must, therefore, be my farewell speech to you. I fear I am becoming like an actor who continues to appear on the stage after announcing his retirement until his friends begin to wonder when they will really see the last of him. I might almost borrow the words of Charles II, to whom the editor of an influential Calcutta newspaper recently compared me, and say "I am sorry Gentlemen, that I am so unconscionable a long time a'dying."

My first object must be to thank you for the honour you have done me in electing me an Honorary Fellow. This has given me great pleasure and enables me to feel that even after I have returned to England there will be one little root which will still bind me to Bengal. Your Fellows are all men of such learning and distinction that I feel it a proud privilege to be included among their number.

Mr. Tipper has spoken very kindly of my sympathy with, and personal interest in, the work of this Society. I can assure you that I have gained more than I have given by my association with it. Here I have encountered patient study and true scholarship, learning pursued for its own sake and an honourable rivalry in giving rather than getting. The atmosphere of this learned Society is a pleasant change from that in which I have had to work. It has been a privilege to me to make the acquaintance of your scholars and I have counted your annual meetings as one of my yearly pleasures.

Mr. Tipper has referred with satisfaction to the fact that the Society created two records in point of numbers in the years when he was its General Secretary and its President, respectively. May I also express satisfaction at a similar fact which like Mr. Tipper I mention as no more than a coincidence, though a happy one. When I addressed the Society for the

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first time its membership was the lowest on record for 20 years; now that I am addressing it for the last time the membership has reached its highest point. This is gratifying evidence of the growing interest taken by the public in the Society's work. At the same time I share Mr. Tipper's view that numbers in themselves are not an unfailing index of the prosperity of a Society. As he says, the need is for members who will remain members and identify themselves permanently with the interests and activities of the Society. But quite apart from numbers there is evidence of progress and vitality. When we consider the output of work during the past year, the completion of the catalogues and price lists of the Bibliotheca Indica, the new books acquired, the progress made with the catalogue of Sanskrit manuscripts and with the preparation of that of the Arabic and Persian manuscripts as well as the general arrangement and classification of the Society's treasures, I think you have good reason to be satisfied with your achievements. All this proves that the vitality of the Society is still strong and instinct with the ideals with which its illustrious founder established it. The President has again referred to the whole-hearted devotion of the General Secretary, Mr. van Manen, to whose initiative, scholarship and untiring energy the Society owes so much, I desire to associate myself with his tribute. I know how much the present prosperity of the Society is due to Mr. van Manen, but I feel sure he will agree with me that all his efforts would be in vain without the wise direction and enthusiastic inspiration of the President and Council, the whole-hearted support of the general body of members and the loyal co-operation of the staff.

The President has taken as the subject of his address this year the question of the Library, which as he rightly says should be one of its most valuable assets. He has explained to us the various problems with which a librarian has to deal and it must be obvious to every one that apart from the necessity of adding to its books and keeping it up to date, the cost of maintaining a lending library, such as this, liable as it is to the ravages of climate and insects, must be very considerable.

The fund, therefore, which has been started by Dr. Hora is of the utmost value, and I should like to see enough money raised in response to the appeal to defray the cost of maintaining the existing library for all time, leaving it to posterity to do the same by the acquisitions which they make. I put forward last year a similar suggestion with reference to the Society as a whole—namely, that each year's additions should be fully endowed. I have lately seen one or two conspicuous examples of this in other spheres and I do not see why it should not be possible here. Generous patrons of education have often been glad to endow a school. Libraries are the schools of grown-up men, and have an equal claim on such generosity. I

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trust that your Society may find its Maecenas—an enlightened, imaginative and generous patron, who by endowing your library will earn for himself the praise of his own generation and the gratitude of posterity.

Ladies and gentlemen, I was tempted by the antiquity of this Society to recall in my first address the emotions of Napoleon in the presence of the pyramids, and to-day in speaking to you for the last time I am impelled to return to the same thought. I do indeed feel proud to think that I have been made an Honorary Fellow of a Society which is as old as the United States of America, which was established before the French revolution, which has seen the downfall of many ancient dynasties and the birth of many new nations, which includes among its members past and present the best scholars of their age, and embodied in whose books is to be found the best intellectual thought for every country in the world. Throughout its long history, undisturbed by political crises and international upheavals, this Society has steadily pursued its task of accumulating and publishing to the world knowledge of all that is best and deepest and greatest in India, thus making India known and honoured all over the world, and laying the foundations of a solid understanding and mutual respect between the East and the West.

To know an individual you must be able to see below the surface of his mere external appearance, you must know and understand the thoughts of his heart. So too with a nation. Those who judge by external evidence alone will be misled. To know India you must know something of her soul, and material for its study is to be found here.

In one of my farewell speeches recently I spoke of some disappointment that I had experienced in the political sphere during my term of office. I should be sorry if I were to convey the impression to any one by what I then said that disillusionment and disappointment were all that I had found in India. That is far from being the case. Perhaps it is those who come to India with the belief that they have something to teach who are most likely to be dissatisfied with the response they receive, but those who come to learn will, I am confident, not be disappointed. I am not ashamed to confess that it is only in those matters where I thought my knowledge was greatest and where I believed I had something to contribute that I have found disillusionment. The India that I did not know and of which I have come to know a little during the last five years has given me rich and unexpected treasures of experience that I shall value all my life. I have found the things which are India's own to be so much greater than those she is seeking to copy from others. That which is indigenous and genuine and original has compelled my admiration whenever and wherever I have met it. It is only the second-hand imitations of the pro-

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ducts and thoughts of my own country which fail to impress me when they are offered to me as Indian goods. How little should we value the opinion of a man who came to India and complained of her roads but said nothing of her rivers, who criticized the monotony of her scenery and had never seen the Himalayas, who judged of her architecture by the Victoria Memorial, or her literature by the daily press! Even so, he is an unreliable interpreter of the thought of India who can only hear her voice in the resolutions of Congress.

Ladies and gentlemen, for the last week I have been living in Camp and have had many opportunities of studying the ways and habits of elephants and I could not help feeling as I watched these glorious animals that here was an embodiment of the civilization of India. Their antiquity, their calm dignity, their deliberation, their immense reserve of strength, their complete self-confidence and their superb humility, are all qualities that might well be held up as ideals of character by those who are responsible for the training of youth. The country that has produced and tamed the elephant has surely as much to be proud of as a country that has produced the steam engine, and a people that had acquired the qualities of the elephant would have no cause to fear or hate any other people in the world.

You may think, perhaps, that I have wandered far from the Asiatic Society of Bengal, but believe me that I have derived during the last five years from my intercourse with your Society the same thoughts, the same pleasure, the same happy memories, the same inspiration as I derived from the great beasts that bore me so safely and skilfully through the jungle. If an elephant could speak I am sure it would speak in Sanskrit. Its indifference to the fussiness of all lesser creatures and the willing service which it renders to the ignorant but kindly *Mahout* who sits upon his neck and whom at any moment it could trample into dust, seemed to me a symbol of the dignity of this Society and of the service which its scholars willingly render to the public. Pundits and elephants, then, are things which are associated in any mind, they alike arouse my deepest respect and I shall ever be grateful to the country that has made me acquainted with them both.

In taking my leave of you I must again thank you for the hospitality you have shown me during the years that I have lived in Calcutta and for the honour you have conferred upon me by admitting me to your fellowship. I hope the Society will long continue its valuable work and I wish it many years of continued prosperity.

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OFFICERS AND MEMBERS OF COUNCIL ASIATIC SOCIETY OF BENGAL, 1927.

Elected and announced in the Annual Meeting, 7th February, 1927.

President.

W. A. K. Christie, Esq., B.Sc., Ph.D., M.Inst.M.M., F.A.S.B.

Vice-Presidents.

Sir R. N. Mookerjee, K.C.I.E., K.C.V.O.
Rai Upendra Nath Brahmachari, Bahadur, M.D., M.A., Ph.D., F.A.S.B.
Dr. Sir Devaprasad Sarbadhikari, Kt., M.A.
Dr. E. H. Pascoe, Esq., M.A., Sc.D., D.Sc., F.G.S., F.A.S.B.

Secretaries and Treasurer.

General Secretary :—Johan van Manen, Esq.
Treasurer :—Sunder Lal Hora, Esq., D.Sc.
Philological Secretary :—Mahamahopadhyaya Haraprasad Shastri, C.I.E., M.A., F.A.S.B.
Joint Philological Secretary :—Shamsu'l 'Ulamā Mawlawī Hidayat Hosain, Khan Bahadur, Ph.D., F.A.S.B.
Natural History Secretaries. { Biology :—Major R. B. S. Sewell, M.A., M.R.C.S., L.R.C.P., F.L.S., F.Z.S., I.M.S., F.A.S.B. / Physical Science :—C. V. Raman, Esq., M.A., D.Sc., F.R.S., F.A.S.B.
Anthropological Secretary :—Rev. P. O. Bodding, M.A., F.A.S.B.
Medical Secretary :—Major R. Knowles, I.M.S.
Library Secretary :—Lt.-Col. N. F. Barwell, M.C., M.A.

Other Members of Council.

Hon'ble Mr. Justice C. C. Ghose, Kt., Barrister-at-Law.
Percy Brown, Esq., A.R.C.A.
B. L Mitter, Esq., M.A., B.L., Barrister-at-Law.
Suniti Kumar Chatterji, Esq., M.A., D.Lit.
J. H. Lindsay, Esq., M.A., I.C.S., J.P.
B. De, Esq., M.A., I.C.S. (retired).

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EXHIBITION ANNUAL MEETING.

List of Exhibits shown after the Annual Meeting of the Asiatic Society of Bengal, on the 7th February, 1927.

1. Exhibited by the Geological Survey of India.

(1) *Four fragments of a Meteorite.* The fall occurred in the neighbourhood of Dabra in the Nandwai Pargana of the Indore State on the 26th June, 1926.
(2) *Ruby in Limestone*, Mogok, Burma.
(3) *Sapphire in Limestone*, Mogok, Burma.
(4) *Turquoise in Kaynite*—Talc schist, Rakha Mines, Singhhum, Bihar and Orissa.
(5) *Zinc Blende*, Lower Dorabi, Anji Valley, Jammu Province, Kashmir.
(6) Sivapithecus, A Miocene Indian Ape
The Most Probable Ancestor of Man
Skulls of a Gorilla and a modern Man, and the jaw of fossil Heidelberg Man are exhibited for comparison with the model of the jaw of Sivapithecus.

Human Characters of Sivapithecus.

A. Broad teeth.
B. Deep palate.
C. Steep inner border of jaw.
D. Absence of "simian shelf."

Ape-like Characters of Sivapithecus.

1. Large canine and front premolar.
2. Wisdom teeth still functionary.
3. Alignment of canine with cheek teeth.
4. Absence of chin.

The ape-like characters were probably lost late in human development, in response to increase in size of brain, which led to changes in the feeding and social habits and the adoption of articulate speech. Therefore (1) and (2) became unnecessary and modifications in regard to (3) and (4) provided more room for the movement of the tongue in framing words.

A table, indicating the probable ancestry of Man and the Anthropoid Apes, is exhibited.

2. Exhibited by Mr. J. A. Chapman.

Some Manuscripts and documents of interest.

(1) Mir'at-i-Jahān-Numā.
(2) Tārīkh-i-Fīrūzshāhī.
(3) Tārīkh-i-Shāhanshāhī.
(4) Autograph letter of Maharānī Bhawani of Natore.
(5) Autograph letter of Maharaja Nanda Kumar.

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(6) A Deed of a widow who sold herself during the Great Famine of Bengal, 1770.
(7) Bolaqi Das—Muraqqa'-i-Jahān-Numā. *Printed.*
(8) Halhed (N.B.): A Grammar of the Bengali Language 1778. *Printed.*

3. Exhibited by Dr. S. L. Hora.

(1) *Certain Volumes of Manuscript Drawings of animals in the Library of the Asiatic Society of Bengal.*

The manuscripts exhibited here are about a century old and those that contain Hamilton's (once Buchanan) drawings of fish have become classical in the history of Indian Ichthyology. The other two volumes dealing with the "Natural History of Mysore" and the "Zoology of the Indus" have again been brought to light after many years. It was once the intention of the Society (1842-1846) to publish the "Zoology of the Indus" under its auspices and a sum of about Rs. 7,000, was spent in lithographing and colouring some of the plates. But this idea was ultimately given up and in the succeeding years even the name of the author was forgotten and our current library catalogue contains a very insufficient entry about this volume.

It was the discovery of such valuable treasures in the Society's Library that led the Council to appeal to the members for donations to establish a Permanent Endowment Fund for the Library.

Some manuscripts in their old dilapidated condition are exhibited, while along with them are placed those that we have now properly preserved at considerable cost.

(2) *An Albino Magur Clarias batrachus (Linn.).*

The normal colouration of the Bengal *Magur* is dark above, with the belly and the underside of the head light. Sometimes transverse rows of spots are present along the sides of the body and tail. In the abnormal specimen, exhibited here, the whole of the body is white with the exception of a few patches of the original dark colour.

A normal specimen is exhibited alongside for the sake of comparison.

(3) *Peculiar Fishing Implement from the Kangra Valley.*

The implement consists of three pieces of hemp twine knotted together and a number of horse-hair nooses tied to the central piece, the two end pieces of twine being knotted so as to form running nooses. It is fixed in a rapid running stream and small fish are caught in the horse-hair nooses.

A fishing noose used by the Sema Nagas is also exhibited.

4. Exhibited by Mr. A. F. M. Abdul Ali.

Miscellaneous Historical Documents.

(1) Letter from the President and Council of Fort St. George, enclosing a copy of the verdict of the inquest held on the death of Lord Pigot and a bill of indictment against the late administration and others for wilful murder, and reporting that

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their sessions have had to be adjourned, pending the determination of certain points of law, on which they desire a reference to the Judges of the Supreme Court. (Home Dept. Pub. Dated 3rd November, 1777, No. 1.)

(2) Copy of the verdict of an inquest held at Fort St. George from the 11th May, 1777, to the 7th August, 1777, on the body of Lord Pigot. (Home Dept. Pub. Dated 3rd November, 1777, No. 2.)

(3) Bill of Indictment against Mr. George Stratton and others for the murder of George Lord Pigot. (Home Dept. Pub. Dated 3rd November, 1777, No. 3.)

(4) Original notes and minutes on the promotion of European Literature among the natives of India by :—

(i) Hon. A. Ross, dated 7th March, 1835.
(ii) Mr. H. Prinsep, and Hon. Lt.-Col. Morison, C.B.
(iii) Mr. H. Prinsep's minute, dated 15th February, 1835.

N.B.—The remarks and notes in pencil at the foot of Mr. H. Prinsep's minute are apparently in the handwriting of Hon. T. B. Macaulay but the signature and some words are defaced. (Home Dept. Pub. Dated 7th March, 1835, No. 19 and K. Ws.)

(5) Lord Auckland's minute on the promotion of education among the natives of India. (Home Dept. Gov. Genl's. Dated 24th November, 1839, No. 10.)

(6) Incorporation of the University of Calcutta with adaptations for the Presidencies of Madras and Bombay. (Home Dept. Pub. Dated 12th December, 1856, Nos. 54-5.)

(7) Introduction of Stamps in suppression of the system of money payments as postage. (Home Dept. Pub. Dated 18th March, 1853, No. 1.)

(8) Postal Reforms. (Home Dept. Pub. Dated 1st July, 1853, Nos. 1-3.)

(9) Postal Reforms. (Home Dept. Pub. Dated 12th May, 1854, Nos. 44-45.)

(10) Introduction of stamps in suppression of the system of money payments as postage. (Home Dept. Pub. Dated 19th May, 1854, No. 64.)

(11) Proclamation by Nana Dunde Punt, the celebrated "Nana Sahib" of Mutiny fame. (Home Dept. Pub. Dated 7th August, 1857, No. 137.)

(12) From Nana Farnavis, minister of the Peshwa. (For. Dept. Pers. Dated 14th November, 1785, No. 94.)

(13) From the Peshwa Baji Rao II. (For. Dept. Pers. Dated 20th September, 1798, No. 361.)

(14) From Haidar Beg Khan, a minister of Nawab Asafud-Daulah. (For. Dept. Pers. Dated 11th August, 1789, No. 175.)

(15) Plan for establishing a Route for mail from India to England via Red Sea. (For. Dept. Pol. Dated 11th September, 1812, Nos. 7–9.)

(16) Application of Samru Begam for a title to her heir Mr. Dyce Samru with a forwarding letter from the former in his own handwriting. (For. Dept. Pol. Dated 24th February, 1835, Nos. 77–80.)

5. Exhibited by Mr. H. C. Das-Gupta.

Reptilian Remains from the Lameta Beds of Jabbalpur.

There are a few localities in India where remains of dinosaurian reptiles are known to occur and Jabbalpur is one of them.

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Both the specimens were obtained from a hill within the cantonment area of Jabbalpur. The bigger specimen is only a part of the humerus of a fairly big-sized herbivorous dinosaur and belongs to the genus Titanosaurus. The smaller specimen is the tooth of a carnivorous dinosaurian reptile.

6. Exhibited by Mr. Vinayak Lal Khanna.

(1) Picture of Siva (water colour), about 80 years old, with the whole of Mahimnastava inscribed in the figure.
(2) A Hindi manuscript about 300 years old: Ramchandrika of Keshavdas, who flourished during the reign of Akbar.

7. Exhibited by Raja Kshitindra Deb.

A photographic reproduction of the original Sanad (with translation) conferring the hereditary title of "Raja Mahasai" by the Mogul Emperor Aurangazeb, dated 10 safar, 1090 Hijra (1673 A.D.), on Raja Rameswar Rai Mahasai, ancestor of Rajah Kshitindra Deb Rai Mahasai of Bansberia Raj, the present holder of the title.

8. Exhibited by Mr. K. Biswas.

Algal Flora of the Chilka Lake.

Illustrations of some of the interesting brackish water plants growing in the Chilka Lake. Some of these algae are food for fishes; and *Gracilaria Confervoides* and *Grateloupia filicina* are very fascinating for their beautiful colour and the graceful festoons which they form on rocks along the margin of the lake. Detailed descriptions are added to each plate.

9. Exhibited by Dr. M. Hidayat Hosain.

Illustrated Islamic Manuscripts from the Society's Collections.

1. Jāmi' ut-Tawārīkh (D.31).

A small portion of the great historical work of Rashīdu'd-Dīn, whose real name was Faḍlu'llāh b. 'Imādi'd-Dawla (D.718-1318) containing 21 Persian pictures.

2. Ā'īn-i-Akbarī (D.5).

The well-known work on India, containing a description and a statistical account of the Mughal Empire under Akbar the Great, by Abū'l Faḍl b. Mubārak 'Allāmī (D.1011/1602) containing two full page pictures at the beginning and one in the middle of the Manuscript.

3. Amīrnāma (D.30).

A biography of an Afghān Chief, Amīru'd-Dawla Muḥammad Amīr Khān. Composed in 1240/1824 by Basāwan Lāl, surnamed *Shādān* of Bilgrām. Containing about 50 paintings of modern Indian style.

4. Ṣuwaru'l-Aqālīm (D.228).

A compendium on general geography with special reference to "wonders of various kinds" composed in 748/1347-1348 and dedicated to Muẓaffaride prince Mubārizu'd-Dīn Muḥammad

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(713-760/1313-1359) of Fārs and Kirmān. The manuscript was transcribed in 1054 A.H. and contains 39 small miniature paintings depicting the "wonders."

5. Tafrīḥu'l-'Imārāt (D.119).

A description of the remarkable buildings of Agra. Composed by Sīl Chand, who dedicated his work to J. S. Lushington, Collector and Magistrate in Agra in 1825-1826. Containing six drawings.

6. Qiṣṣa-i-Nūsh Āfarīn (D.4).

A story of the adventures of Princess Nūsh Āfarīn and her lovers, containing 45 pictures of modern Persian Style.

7. Shāhnāma (Na.70)

A poetical work of Abū'l-Qāsim Firdawsī Ṭūsī (D.411/1020). Illustrated with 8 curious miniature paintings in the Safawide (Persian) style. The manuscript is written caligraphically with two full-page ornamented frontispiece.

8. Jām-i-Jam (Na.24).

A Sufico-didactic poem in Mathnawī verse by Ruknu'd-Dīn Auḥadī Iṣfahānī (D.738/1338) and dedicated to Sulṭān Abū Sa'īd (716-736/1316-1335) containing one picture of Persian style.

9. Tīmūrnāma (Na.21).

A versified history of Tīmūr by Hātifī (D.727/1520-1521) containing three paintings of Persian style.

10. Futūḥu'l-Ḥaramayn (Na.91).

A versified description of the places of pilgrimage at Mecca and Medina by Muḥyī Lārī (D.933/1526-1527). Copied in 981 A.H. by Ghulām 'Alī and contains numerous illustrations.

11. The same (Na.89).

12. The same (Na. 90).

13. Dīwān-i-Makhfī (Nb.122).

The well-known collection of poems ascribed to Aurangzīb's eldest daughter Zību'n-Nisā, who used the Takhalluṣ "Makhfī" (D.1114/1703) containing four pictures in Indian style.

14. Zīj-i-Jadīd-i-Sulṭānī (J.24).

The well-known edition of the astronomical tables of Ulugh Beg, the grand-son of Tīmūr, and was compiled by him with the assistance of 'Alī b. Muḥammad Qūshchī (D.879/1474-1475) and others. Containing some modern paintings illustrating the various constellations.

15. Tarjuma-i-Kāshī Khand (D.108).

A translation of a large work on the places of pilgrimage and the legendary topography of Benares, translated by Ānand Khān, with the Takhalluṣ Khūsh, and dedicated to Jonathan Duncan, containing one picture in the beginning of the 4th vol.

16. Majmū'a (Oa. 51).

A collection of Persian translations of different Sanskrit works, containing three miniature paintings.

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17. Yūsuf Zulaykhā (Na. 179).

A Mathnawī poem of Jāmī's Yūsuf Zulaykhā, translated in Pushtū. Containing several pictures.

18. Farhang-i-'Ajā'ibu'l-Ḥaqā'iq-i-Aurangshāhī (D. 254).

A rare voluminous encyclopædia of India by Hidāyatu'llāh b. Muḥammad Muḥsin al-Qurayshī al-Hāshimī al-Ja'farī, dedicated to Aurangzīb, containing the description of the animals, plants, minerals, etc., of India, with many illustrations.

19. Tarjuma-i-Mahābhārata (No. 161, 2nd List. Curzon Collection).

A Persian translation of the Mahābhārata, containing more than a dozen pictures in modern style.

10. Exhibited by Mr. Satya Churn Law.

Models of five bird-traps used in parts of the Hughli District.

(1) *Dughari Phānd*: A contrivance of varying sizes usually placed on ground near jheels and marshes to catch birds like king-fisher, heron and white-breasted water-hen. Made of two pieces of split bamboos, both bent like bows with two strings which are smeared with bird-lime and in between them are tied two insects which serve as bait.

(2) *Ātā-kāti*: For catching smaller birds. Made of two very fine pieces of split bamboos which, while in use, are tied with thread in one end (an insect is tied to the thread also), the latter remaining fixed to the ground; the other end of each is bent so much as to be thrust into and thus firmly attached to the ground,—the arches which are thus formed are besmeared with bird-lime.

(3) *Tāl-Chonch Phānd*: named after palm fibres of which it is made; specifically used to snare heron and water-hen. No bird-lime is used in this case.

(4) *Ghorar-Bāli Phānd*: so named from the horse-hairs of which it is composed. It resembles (3) in many respects. Used for snaring dove, myna, parrot.

(5) *Satkā-Kal*: named after the mechanism of a fishing trap called *Satkā*, the fish-hook in the present instance being replaced by a noose of thread. No bird-lime is used.

11. Exhibited by Major R. B. Seymour Sewell.

Skulls from Mohenjo-Daro.

During the excavations that were carried out by the Archæological Survey of India at Mohenjo-Daro in Sind during the cold weather of 1925-26, a number of human skeletons were discovered and these have been sent to the Indian Museum for examination. In most cases the skull and a few of the smaller bones are all that has been preserved intact. The skeletons appear to have been found in two separate groups, of which by far the larger was in a room, the smaller group being scattered along what seems to have been a street. The skeletons found in the room were lying in any position and with a single exception show no sign of ever having been buried, in the ceremonial sense of the term. The collection includes representatives of three different races. Of these, one is represented by a single skeleton, that was excavated at a higher level than the others and was

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obviously a true burial. The skeleton is quite recent. The other two appear to be contemporaneous with Mohenjo-Daro civilization and are probably between 4,000 and 5,000 years old.

12. Exhibited by Mr. Johan van Manen.

(1) *A collection of Lepcha Manuscripts.*

In India there are a number of local dialects and languages which are on the road to extinction. The number of speakers in each group is small, the number of literate members of the groups still smaller. Amongst these languages is the Sikhimese language called Rong or Lepcha. The script for this language was invented about two centuries ago. The extant literature comprises about 30 different works. Most of them are Buddhist productions, freely translated from the Tibetan. All MSS. are on paper. The older ones on indigenous paper; the newer ones written in English copy books. The collection exhibited is of the two types. Of the newer MSS. in the possession of the exhibitor (about 120 in number) half were due to only a few copyists. Of these, the most prolific one has recently died. New manuscripts will become rarer and rarer.

(2) *A Tibetan Spirit-trap.*

Tibet is a country ridden by spirits, good and evil. The good spirits need no attention: they do no harm. The evil ones have to be guarded against. To do so the Tibetans have contrived an ingenious spirit-trap. The spirits have a notorious liking for bright colours. Acting on this knowledge, and on special information about the likes and dislikes of each kind of spirit, the Tibetan magician constructs a contrivance of bamboo and coloured threads constituting a suitable bait for the spirit, and places it near the habitation of the man who feels that he is being assailed by the undesirable visitor. The latter sees the structure, is attracted by it, taking it to be a fit 'palace' for himself, enters it, and is then caught in it like a fly in a spider's web. These contrivances are called *mdos* (pronounce *dō*), and vary in form and colours according to the various Buddhist sects, as well as according to the kind of spirit that is to be enticed. The present sample is one in the *gelugpa* manner, and is called *zhal-skyur*, 'face-rejecter'. The central pole is the 'palace' for the chief spirit. The twelve minor contrivances are the 'out-houses' for his attendants.

13. Exhibited by the General Secretary.

(1) *The Society's Publications of* 1926.

(*a*) Bibliotheca Indica.
(*b*) Catalogues.
(*c*) Miscellaneous.
(*d*) Journal.
(*e*) Memoirs.
(*f*) Indian Science Congress.
(*g*) Price Lists.

(2) *A photographic reproduction of an Ahom Chronicle, presented to the Society by the Government of Assam.*

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ANNUAL REPORT FOR 1926.

The Council of the Asiatic Society of Bengal has the honour to submit the following report on the state of the Society's affairs during the year ending 31st December, 1926.

Ordinary Members.

The calculated total of Ordinary Members on the roll of the Society at the close of 1926 was 552 as against 462 at the close of 1925. This means a net increase of 90 during the year, which constitutes a record far in advance of any previous net increase for a single year. The number of new elections in this year rose to 153, again surpassing the previous year's record, and maintaining itself above the hundred mark for three years in succession. It is scarcely possible to expect that such a phenomenally high number of admissions could be permanently maintained in the future.

Gains and losses during the year were as follows :—

Gains.		*Losses.*	
Old elections carried forward	3	Applications withdrawn ..	2
New elections	153	Elections lapsed ..	17
Resignations withdrawn ..	2	Elections carried forward ..	18
		Deaths	11
		Resignations	17
		Rule 38	0
		Rule 40	3
Total	158	Total	68

Initial total 462 ; net gain 90 ; final total 552.

With the year's gain the previous losses in Membership for another six years in the history of the Society (1909–1914) have been again wiped out and our previous record-total of 519 in 1911 has been amply surpassed. May we never again fall below the present total. The number of elections that lapsed on account of non-payment of the entrance fee was rather high, namely 17. The remarks on this subject made in last year's report may be referred to. Our membership registers continue to be kept very carefully and the various cross-checks gave results which tallied.

A strict and unwavering application of the prescriptions of Rule 38 remains necessary. The margin of outstanding arrears of subscriptions continued to be appreciable. Softness of heart of the Council in this matter towards Members, is hardness of heart towards the Treasurer and the administration.

Amongst those lost by death during the year there were

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several old and especially respected members whose memory will be cherished in the annals of the Society and for whose departure the Society is the poorer. Amongst them were :—

Khan Saheb Abdul Wali (1894).
Jatindra Nath Rai Chaudhuri (1895).
Miss Flora Butcher (1900).
Maharaja Jagindranath Roy (1903).
Rao Bahadur D. B. Parasnis (1904).
Man Mohun Ganguli (1912).
Rai Bahadur Lalit Mohun Singh (1912).

Associate Members.

During 1926 the following was elected an Associate Member :—

Durga Das Mukherjee, M.Sc.

The following Associate Member became an Ordinary Member at the expiry of the period of five years for which he had been elected an Associate Member :—

Dr. Sahay Ram Bose.

During the present year no Associate Members were lost. The present number stands at 12 ; statutory maximum 15.

Special Honorary Centenary Members.

Our two Honorary Centenary Members have remained with us.

Ordinary Fellows.

At the Annual Meeting held on the 1st February, 1926, the following Member was elected an Ordinary Fellow :—

Rev. P. O. Bodding.

The name of the following Ordinary Fellow, who had ceased to be a member under Rule 40, at the end of 1921, has now been omitted from the list of Ordinary Fellows : —

Dr. M. W. Travers, F.R.S. (1910).

No Ordinary Fellows were lost by death or resignation during the year.

At the end of 1926 the number of Ordinary Fellows was 34, statutory maximum 50.

Honorary Fellows.

During the year we lost through death the undermentioned Honorary Fellow :—

Dr. Edward Granville Browne (1911).

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No Honorary Fellows were elected during the year.

The number at the end of 1926 was 25, statutory maximum 30.

Obituary.

During the year the Society received, to its great regret, news of the death of two of its former Presidents :—

Sir Alfred Woodley Croft.
Lord Carmichael, first Baron of Skirling.

Office Bearers.

There were but few changes in the composition of the Council during the year.

To the Council's great regret the President, Mr. G. H. Tipper, had to leave India under peremptory medical orders from April to November, during which time Dr. Brahmachari acted as President under the rules. The Council expressed its sympathies to the President. After his return Mr. Tipper had again to be absent from Calcutta, in December, and Sir Rajendra Nath Mookerjee, being back in India, acted for him during this period.

Mr. H. E. Stapleton resigned his seat on the Council with effect from 1-11-26, on account of his departure from India, and the Rev. P. O. Bodding was co-opted in his place on the Council as Anthropological Secretary.

Sir Rajendra Nath Mookerjee was absent from India from February to September and Mr. Percy Brown from April to October.

Mr. P. C. Mahalanobis was absent from India from the 15th May and resigned his seat on the Council in September. The place was left unoccupied.

Dr. Hora was absent from Calcutta from May 15th till the end of June during which period the General Secretary officiated for him.

Lt.-Col. Barwell was absent from Calcutta during September, and the General Secretary officiated for him.

Office.

The General Secretary continued to perform the amalgamated duties of General Secretary and Assistant Secretary, and, except for a single day, was in office every day of the year, all Sundays and holidays included. The phenomenal net increase in membership of 215 within the last three years has also vastly increased the demands on the office and even the considerable additions to the staff during the last years have not kept pace with the growing volume of work. It has to be kept in mind that the new appointments on the clerical staff have main-

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ly been made to undertake work hitherto neglected and to clear up confusion in past records and accumulations, requiring urgent attention. One great improvement, however, was made by the appointment, during the year, of a Head Clerk, on the 21st of May. Mr. P. O. Matthai, the incumbent, has proved a reliable worker and has fully justified the expectations regarding his capabilities.

It is clear that the office of the Society can only be deemed fully satisfactory if it is so well-staffed that all routine work can be performed by it without undue strain and with a modicum of leisure at the end of the day, avoiding the enervation of continually hectic activity. At present there is still too much over-time work required to regard the position as satisfactory. It is the well-known unending chain of: greater activity producing greater income; greater income permitting a larger staff; a larger staff performing more efficient work; and more efficient work bringing greater prosperity and a larger membership. It seems, however, entirely probable that vigorous vitality can lead to the fulfilment of all requirements as to a qualified, expert and numerically sufficient staff, which at the same time is self-supporting.

One of the special problems connected with the staff is the difficulty of finding suitable men to perform work of the varied and unstereotyped nature characteristic of our office, and at the same time patient and modest enough in their demands to gradually build up a position of responsibility with consequent adequate remuneration. Promising young men often expect to be placed within a few months on the same level with older employees; and others who are content with simple beginnings often prove insufficiently useful. During the year five clerks were appointed on probation but left of their own accord within three months of taking up their work. Two others, appointed in September and November, have so far given satisfaction. They are R. Ramalingam Iyer and C. R. Halder, at present engaged on work connected with files and library.

In the subordinate staff the usual minor changes took place, which do not call for detailed comment.

Correspondence continues to be a difficult element in the administration. This year the number of out-going letters was 2,914 and that of in-coming letters 3,100. The number of letters issued was fully 200 less than in the year before and fully 550 less than in 1924. With constantly greater pressure of work on the General Secretary and absence of a correspondence clerk on the staff such a result is inevitable. The meaning is, that a growing margin of correspondence is inadequately attended to or left altogether un-attended. The conclusion is, that the appointment of a correspondence clerk would be a splendid investment. The file clerks appointed this and last year have done useful work. The report at the end of the year

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was that 450 files have been finally put together and checked after having been segregated and sorted out the year before. Our six large almiras filled with miscellaneous old papers still await examination.

Work in the stock room continued energetically. A hundred completed works in the *Bibliotheca Indica* were completely bundled, as well as a few miscellaneous works and the volumes of the New Series of the *Journal and Proceedings* and *Memoirs*, representing a sale value of about 1,50,000 rupees. The estimate is that this work is now about half-way and will require another two or three years for its completion, provided the speedier rate of progress attained to during the year can be maintained.

The exchange and distribution services still need to be re-organised.

The purchase of a second typewriter and of a mechanical duplicator machine was an important improvement during the year. A quicker mode of despatch of publications and circulars was devised during the year. By concentration of all available hands on the work each despatch was made in a single day.

A trial was given to the system of using printed addresses for the despatch of circulars and publications. It did not prove entirely satisfactory on account of the large percentage of changes in the addresses of Members. Some other system may have to be devised.

During the year all office stationery was segregated in special almiras, and stocklists were drawn up. One clerk on the staff was placed in charge of issues and their bookings. The question of replenishing stocks is now arranged as a matter of mechanical routine.

An alphabetical index to the outgoing letter files was prepared and a complete index of all correspondence since the introduction of a triplicate numerical letter file was completed. It embraces over 7,600 items from July 1924 to date.

A third block cabinet was acquired and all the blocks in the possession of the Society, many thousands in number, were finally arranged in the order of the publications in which they were used.

Prints of these blocks were arranged in scrapbooks, in the same order, and now old blocks are not only properly preserved but can be found and identified at a moment's notice.

Some minor repairs to office furniture were effected and some new items acquired.

On the whole, the staff showed zeal and interest in their work during the year and the prevailing spirit was generally satisfactory, especially amongst those who have been sufficiently long in their posts to enable them to identify themselves with the needs and aims of the Society.

Under this heading the final word must be that, on its

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material side, the work of the Society depends on the staff of its office. The Council can give the inspiration and direction; the Members can give the support. But only a well organised, capable, contented and willing staff can enable direction and support to have their full effect by proper execution.

Council.

The Council met 13 times during the year. The attendance averaged 11 of the 20 component members.

In their February meeting the Council placed on record their thanks to the retiring President, Sir Rajendra Nath Mookerjee, for the way in which he has served the true interests of the Society during the period of his Presidency.

Finance Committee.

The practice of convening the Finance Committee for a date prior to that of the monthly Council Meeting was continued during the year to great advantage It enabled the Finance Committee to function as a body dealing with finance questions not as mere matters of routine but to consider fundamental problems and to initiate new measures. As a result some important decisions were arrived at, leading to far-reaching improvements in the accountancy of the Society, of which details are given under the heading 'Finance.'

Committees of Council.

The Council decided to reduce the number of its standing committees, and to appoint special committees *ad hoc* to deal with any emergent problem whenever required.

The standing committees maintained are the Finance, the Publication and the Library Committees.

A constant problem is how to make committees meet where the Council is composed of members who, without exception, are men of a crowded business or professional life. The problem is a universal one in our modern times from which all leisure is fast disappearing, and is encountered in every public institution. The inevitable compromise is the adoption of a policy of go-slowly and of not attempting too much in any single year. Ultimately, this will prove most fruitful and satisfactory.

A great number of questions were reviewed by Council for which special committees were appointed, for study and submission of recommendations.

They were the following :—

A lease committee, to consider various lease-offers received for vacant plots on the Society's compound.

Annandale Memorial Committee, to carry into effect the

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resolutions of Council with regard to this memorial and to frame rules for the memorial award.

Sir Asutosh Memorial Committee, reconstituted to make final recommendations.

Sir William Jones Gold Medal Committee, to frame rules.

Barclay Memorial Committee, to re-cast the existing rules and bring them in line with those for other memorial awards.

Insurance Committee, to study, and if necessary revise, the present insurance policies taken out by the Society.

Rules and Regulations.

No changes in the Rules and Regulations were made during the year, though a general revision remains urgent. It may be advisable to consider this matter piecemeal and to begin with the rules regarding subscriptions of members, not so much to introduce drastic changes as to make the terminology more consistent and to embody certain habitual practices in definite rules.

Modification of the Society's Rules is a fairly cumbersome process under the present rule 78 and, though it is advisable to maintain a conservative and cautious guarantee against light-hearted and unnecessary revisions, the latter rule, as it stands, may perhaps be made somewhat easier without any apprehension of consequent danger of unduly rash action.

Indian Science Congress.

The thirteenth annual meeting of the Indian Science Congress was held at Bombay, from January 4th to 9th, 1926, under the patronage of His Excellency the Rt. Hon'ble Sir Leslie Wilson, P.C., G.C.I.E., C.M.G., D.S.O., Governor of Bombay. Mr. A. Howard, C.I.E., M.A., was President. The Proceedings of the Congress were published in November, a publication of 430 printed pages, 52 in excess of last year's issue. During the latter months of the year, the usual administrative work for the Congress in connection with the next Session (Fourteenth Congress), to be held in Lahore, was performed by the Society's office. This preparatory work, with the uninterrupted expansion of the Congress, continues year by year to grow more exacting, entailing a heavy burden on the Society's staff. As in previous years punctuality and foresight in sending in papers or subscriptions left room for considerable improvement on the part of the members. The rush at the end of the year was exceedingly great.

As in the year before, the abstracts were sent by post to all members who had applied for membership before the 20th December.

The Science Congress sanctioned the pay of a special clerk on the Society's staff in charge of the Congress work.

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During the year the Congress finances were entirely separated from the Society's finances, and an account "Indian Science Congress" no longer occurs in the Society's books. This was a very satisfactory improvement.

The Society contributed this year the substantial grant of Rs. 1,200 towards the Congress funds.

The General Secretaries during the year were Dr. R. V. Norris and Dr. S. P. Agharkar.

The General administration of the Congress when not in session, continued, as hitherto, to be attended to by the office of the Society.

The Council resolved to support an invitation to the Science Congress to hold its next Session in Calcutta and to offer such hospitality to the meeting as it will be in the Society's power to give.

In view of their growing bulk and costs the Council resolved to restrict the right of Members of the Society to receive a gratis copy of the Congress Proceedings to such members as make an application for receipt of the copy prior to its publication.

The Council also resolved to impress on the Congress the necessity for the Society to decrease gradually its financial contributions to the Congress funds.

Indian Museum.

The Society's representative on the Board of Trustees of the Indian Museum, under the Indian Museum Act, X, of 1910, remained the same, MM. Haraprasad Shastri.

Kamala Lectureship.

The Council's nominee to serve on the Election Comittee of the Kamala Lectureship, administered by the Calcutta University, remained the same, MM. Haraprasad Shastri.

Deputations.

During the year the Society received invitations to be represented at various functions of the following public bodies :—

Chemical Congress, Brussels.
Ornithological Congress, Copenhagen.
All India Ahmadia Conference, Qudian.
Seventh Congress, Industrial Chemistry, Paris, 1927.
Laying of the Foundation stone, at Bydgoszcz, of the first monument erected in Poland in honour of H. Sienkiewicz.
Opening of the Eckley Brinton Coxe, Jr. Memorial Wing, Museum, University of Pennsylvania.
International Congress of Librarians, Prague.

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For the first meeting Dr. Christie was invited to represent the Society.

For the second meeting Mr. Tipper and Dr. Baini Prashad were invited to arrange for representation.

The third meeting was deemed not to be of a character to justify the Society in being officially represented.

A decision regarding the fourth meeting was held over for the current year.

The dates of the last three meetings were so close on those of receipt of the invitations that there was no time for reply by post, and arrangement for actual representation was entirely impossible.

Under this heading it needs observation that the Asiatic Society of Bengal, being the oldest Institution of its kind in India, with wide international relations and a high repute throughout the scientific world, receives every year flattering proof of the esteem in which it is held internationally through a great number of invitations as here recorded. It is well that the social aspect of the Society's work should be cultivated as much as is possible. The justification of all ceremonial action, however, is its perfection, and ceremonial requires time for due preparation. The social and complimentary side of the activities of a great institution has its importance, but is exacting. It is a problem of consequence, but of difficulty, how to give satisfactorily the required response to the recurring many proofs of international good-will and scientific solidarity. Special consideration of the problem may well be taken up some time in the future.

Congratulations.

The Council addressed an official letter of congratulations to its Member, Dr. Suniti Kumar Chatterji, at the occasion of the publication of his monumental work on "The Origin and Development of the Bengali Language" of which he presented a copy to the Society's library.

H.E. the Viceroy.

The long convention, inaugurated at the time of Warren Hastings, of inviting the Governor-General of India to accept the Office of Patron of the Society was observed once more on the arrival in India of the present Viceroy, Lord Irwin. The Council decided to give the occasion a fitting ceremonial form by requesting His Excellency to visit the Society during his first winter sojourn in Calcutta, to be formally installed as Patron. His Excellency graciously accepted the invitation and visited the Society on December the 22nd, being received by the Council Members present in Calcutta. A small exhibition was arranged to demonstrate in a brief

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compass the long record and the manifold activities of the Society. His Excellency showed great interest and made the function a thoroughly pleasant one. Our thanks are due to His Excellency for having so freely given of his overcrowded time in Calcutta and for the interest displayed in the Society's affairs.

At this occasion a "Golden Book" was inaugurated with His Excellency's signature as its first entry.

H.M. the King of the Belgians.

A letter of thanks was addressed to His Majesty for the proof of interest given by the visit paid to the Society in September 1925. A very cordial reply was graciously sent on behalf of His Majesty.

It further pleased His Majesty to confer on the General Secretary the distinction of Officer in the Order of the Belgian Crown.

Elliott Prize for Scientific Research.

Two subjects were selected for the Elliott Prize for Scientific Research for the year 1926, namely (a) Physics, and (b) Geology and Biology, including Pathology and Physiology. A notification regarding the prize appeared in the *Calcutta Gazette*, under date of 15th January, 1926. Papers were received from four competitors and the Trustees decided that only one of them had submitted essays of sufficient merit to deserve a prize. Consequently this prize, for Physics, was awarded to Dr. Bidhu Bhusan Ray, University Lecturer in Physics, University College of Science, Calcutta. The prize for next year will be for research in Geology and Biology, including Pathology, and Physiology, and the official announcement regarding it has been published in the *Calcutta Gazette* in January of this year.

Sir Asutosh Mukherjee Memorial.

The committee constituted in 1925 to submit proposals with a view to perpetuate the memory of the late Sir Asutosh Mukherjee, was re-constituted in 1926, and made its recommendations to Council, which accepted them. It was resolved that the form of the memorial should be a bronze bust of Sir Asutosh to be placed in the Society's rooms, and that the execution should be entrusted to Mr. Harold J. Youngman, of London, an exhibitor at the Royal Academy. Mr. Youngman accepted the commission and submitted photographs of a clay model towards the end of the year. These were approved by the committee, the Council concurring,

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and it is expected that the bust will be received during 1927 for definite installation.

Sir William Jones Medal.

At the occasion of his acting as President of the Society during Mr. Tipper's absence in Europe, Dr. U. N. Brahmachari offered to the Society Government Securities to a face value of Rs. 3,000 for the award of a Sir William Jones Medal in gold to be bestowed by the Society at intervals to be determined for conspicuous contributions to knowledge regarding Asia, alternately in the fields of the moral and physical sciences in the widest sense.

The offer was gratefully accepted and a committee was instituted to frame rules for the award. It is hoped that during 1927 the final recommendation will be placed before the Council.

Society's Premises and Property.

Greater attention was paid to the garden. A number of new flower pots and some implements were acquired. A large number of plants were transplanted and multiplied by division. These are used in the ceremonial full-dress meetings of the Society. The drive was re-gravelled. The general appearance of the Society's grounds has much improved.

The Finance Committee recommended to Council the inclusion in the budget of a recurring head for upkeep and repairs, and estimated the amount annually needed at Rs. 2,000. The recommendation was adopted and the head has been included in the new year's budget.

Two of the desiderata mentioned in last year's report were obtained: a Roneo duplicator, and a photographic instrument for the mechanical copying of MSS. They are mentioned under the headings Presentations and Office.

Desiderata carried over are: a pigeon-hole journal cabinet for display of current numbers, additional card cabinets, and a file installation for the archives.

The questions of a permanent care-taker for the building, and of arrangements for its periodical inspection, also remain to be dealt with.

Accommodation.

Old problems to be carried over as still needing attention are: the provision of a set of small work-rooms for various uses, and the shelving of the stock-rooms.

Artistic and Historic Possessions.

During the year the work of renovating our paintings was continued as far as the budget grant allowed. Two large canvases and one smaller one were cleaned.

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Photographic negatives of 8 additional paintings were prepared, with prints, and now in all 25 paintings have been dealt with. Another 20 remain to be seen to.

Curtain rods and curtains were fixed to a further dozen paintings. The total expenditure was slightly above Rs. 900.

During the year a cabinet was acquired, specially built for the purpose, to hold the Society's collection of copper-plates.

Descriptive catalogues of our artistic and historical possessions still remain desiderata.

During the year a number of photographs of distinguished personalities connected with the Society in previous years were found amongst old documents. These have been framed and hung in the retiring room.

Presentations, Donations, and Legacies.

During the year the Society has received several important gifts of a varying nature.

Financially the following donations were made, also mentioned elsewhere.

From some Members of Council, a sum of Rs. 2,050/- (together with promises of an additional amount) as a beginning of a permanent endowment fund for the Library.

From Count Ohtani, a sum of Rs. 1,000/- for the purchase of a mechanical manuscript copying machine.

From Dr. Brahmachari, Government Securities to the value of Rs. 3,000/- for the institution of a Sir William Jones Memorial.

From Mr. A. F. M. Abdul Ali, copies of 9 important and exceedingly interesting documents in the Imperial archives relating to the early history of the Society.

From the Staff of the Zoological Survey of India, a portrait in oils of the late Dr. N. Annandale, a former President of the Society.

Donations of books are mentioned under the heading Library.

The Society's grateful thanks are due to all the generous donors.

Library.

During the year great attention was paid to the needs of the Library. The Library Secretary placed a minute before the Library Committee which led to recommendations to Council which were accepted. It was resolved to adopt a vigorous and forward policy with regard to both extension and maintenance of the Society's collections. The grants for purchase and binding for 1926 were substantially increased and in the budget Rs. 3,000 for purchase and Rs. 2,000 for binding were

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made available for the year. In consequence of further representations of the Library Secretary the book-buying grant was increased during the year, for the acquisition of certain costly works of special utility, and in all over Rs. 6,200 were expended on purchase and binding as against Rs. 1,840 in 1921. A few of the more important items acquired by purchase are detailed below :—

(1) P. Brown : Indian Painting under the Mughals.
(2) F. Sarre : Islamic Book-bindings.
(3) C. H. Wenyon : Protozoology, 2 vols.
(4) W. W. Rockhill : The Land of the Lamas.
(5) H. M. Kyle : The Biology of Fishes.
(6) R. C. Thompson : The Assyrian Herbal.
(7) Benn : Year-Book of Oriental Art, 2 vols.
(8) William Rothenstein : Ancient India.
(9) Kühnel and Goetz : Indian Book Painting.
(10) Encyclopædia Britannica, 11th Edition Vols. 1–28, and new 12th and 13th Editions.
(11) Chinese Tripitaka, New Japanese Edition, Vols, 1–37.
(12) Australian Encyclopædia, 2 Vols.
(13) Basil Stewart : Subjects portrayed in Japanese colour-prints.
(14) Sir C. Eliot : Hinduism and Buddhism.
(15) R. Bell : Origin of Islam in its Christian Environment.
(16) H. G. Farmer : Arabic Musical Manuscripts in the Bodlian Library.
(17) H. O. Fleischer : Catalogus Codicum Manuscriptorum Orientalium.
(18) H. Cousens : Architectural Antiquities of Western India.
(19) F. Schnurrer : Bibliotheca Arabica.
(20) S. Sörensen : Index to the names in the Mahabharata.

1492 volumes were bound during the year. In the last three years about 5000 volumes have been bound as against approximately the same number during the previous ten years.

In the Library itself systematic work on the preservation of the collection was undertaken by the insertion in all the volumes of tobacco leaves and insecticide powder. Work on the arrangement of the volumes on the shelves was continued and a number of books were transferred from the ground-floor to the new steel shelving upstairs.

The greater attention given to the condition and needs of the Library led to a review of its problems by the Council during the year. The conclusion was that the Library with its hundred thousand printed volumes and twenty-five thousand manuscripts must needs incur expenditure for maintenance which, being recurrent and not subject to diminution, cannot well be met out of current income. Dr. Hora, the Treasurer, following up a hint in this matter by Mr. Tipper given when taking up the Presidentship, gave a lead in the matter, and the Council resolved to initiate a permanent Library Endowment Fund of which alone the income should be made available for library maintenance. Mr. G. H. Tipper, Sir Rajendra Nath Mookerjee and Dr. U. N. Brahmachari led off with substantial donations, other Members of Council made further

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promises and an initial amount of nearly Rs. 3,000 was collected or promised with which to start the Fund. It was also decided to issue an appeal on the subject to the body of Members, which was sent out shortly after the close of the year. Our President is devoting part of his Annual Address to the same problem. Its importance for the future utility of our Institution can scarcely be overrated.

The re-handling of our collections consequent on the installation of the new steel shelving permitted a careful examination of all large size volumes and led to the discovery amongst them of a number of valuable MSS. This find led the Council to decide firstly to make provision in next year's budget for a number of steel cabinets for MSS. only; and secondly to accept Dr. Hora's welcome offer to examine certain remarkable Zoological MSS. and to arrange for their proper renovation and binding. Last year Dr. Baini Prashad rendered a similar service with regard to a volume of MS. drawings by Hamilton Buchanan. This year Dr. Hora did the same for the MS. drawings of animals (Zoology of the Indus), P. B. Lord's Drawings in Sir A. Burnes' collection; and MSS. drawings of animals (Natural History of Mysore), Mackenzie collection. The results were so eminently satisfactory that Dr. Hora has been requested to extend his examination to other volumes. Dr. Hora's full report on these MSS. will be published in the *Journal*.

Another activity of the year was the complete re-arrangement of all elephant-size volumes on the new shelves, segregating prints, MSS. and photographs. Our photographic collection, which is a large one, still awaits examination and classification.

The accessions to the Library during the year, exclusive of about 200 periodicals received in exchange or otherwise, were 255 volumes acquired by purchase and 124 volumes by presentation. Amongst the more important presentations the following may be mentioned :—

(1) W. Filchner: Expedition Filchner nach China und Tibet. (Author.)
(2) Dr. S. K. Chatterji: Origin and Development of the Bengali Language. 2 Vols. (Author.)
(3) Rev. R. Kilgour: The Gospel in many years, etc. (Rev. A. W. Young.)
(4) S. Lévi: Vijnaptimātratāsiddhi, Paris. (Author.)
(5) R. Goris: Bijdrage tot de Kennis der oud-Jaavansche Theologie. (Author.)
(6) E. T. Richmond: Moslem Architecture, London. (Author.)
(7) Sir G. F. Hompson: Lepidoptera Phalaenae, Brit. Mus., London. (British Museum.)
(8) L. S. S. O'Malley: History of Bengal, Bihar and Orissa, etc. (Government of Bengal.)
(9) M. S. Stanoyevich: Slavonic Nations. (Consulate General of Czechoslovakia in Bombay.)

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(10) E. Best: The Maori Canoe. (Dominion Museum, New Zealand.)
(11) Publications of the National Siamese Library in Bangkok. 88 items. (The Library authorities.)
(12) Minerva, Jahrbuch der Gelehrten Welt, 1926, 3 Vols. (Consul General for Germany in Calcutta.)

During the year information was received concerning an important collection of Sanskrit MSS. for sale, at what seems a reasonable price. It is doubtful, however, whether funds can be found for such a purchase when the offer is definitely made to the Society.

Re-arrangements in the disposition of a number of Sanskrit, Arabic and Persian MSS. as well as printed works in Indian vernacular and classical languages, effected a marked improvement in the various rooms concerned.

Finance.

Appendix III contains the usual statements showing our accounts for 1926.

New statements are the following:—

Statement No. 13, Sir William Jones Memorial Fund Account, details concerning which are given elsewhere in the report.

Dr. N. Annandale Memorial Fund Account, No. 14, being a permanent endowment for a periodical award for meritorious work relating to Anthropology in Asia.

Statement No. 15, Permanent Library Fund Account, also separately described elsewhere.

Savings Bank Deposit, No. 21, regarding deposits made for the Society's Staff Provident Fund.

A new and fuller form is given to the old Investment Account, Nos. 19–22, now showing details of the various forms and allocations of the investments.

Statements carried over without change from the previous year pending final ascertainment of commitments and status before liquidation, are:—

Statement No. 9, Catalogue of Scientific Serial Publications, Calcutta.

Statement No. 10, International Catalogue of Scientific Literature.

The other statements are presented as in previous years and do not call for special comment.

All the fund accounts have, however, been made subject to one general improvement. The Finance Committee decided during the year to allocate specific investments to each individual fund, so as to make it possible to show the depreciation or appreciation of such investments for each fund separately, as had hitherto been only shown for the investments in their

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totality. A possible source of confusion in the accounts has hereby been eliminated and the accounts have as a result become more transparent. This measure has to be regarded as one of considerable importance and constitutes a great improvement.

For Statements in the previous issue which no longer occur in the present one, regarding Funds closed during 1925 as detailed in the Annual Report for that year, are those relating to the :—

Anthropological Fund.
Bureau of Information Fund.
Dr. Annandale Fund.

Besides, the following Fund was closed as described under the heading Indian Science Congress in the present report :—

Indian Science Congress Fund.

Statement No. 24 shows the balance sheet of the Society and the different funds administered by and through it.

Statement No. 19, Investment Account (Government Securities) presents an altogether new and more satisfactory appearance as a result of the measure mentioned a few lines earlier.

The funds belonging to or administered by the Society can be classified as follows :—

1. General Fund.
   (*a*) Permanent Reserve.
   (*b*) Working Balance.
2. Specific Funds belonging to the Society.
3. Funds administered by the Society.

At the end of the year the position of these funds as compared with their position at the end of 1925 was as follows :—

	Face value.		Market value.
	31st December, 1925. Rs.	31st December, 1926. Rs.	31st Dec., 1926. Rs.
1. General Fund	2,18,530	2,34,284	1,92,745
(*a*) Permanent Reserve ..	1,77,294	1,86,794	1,46,636
(*b*) Working Balance ..	41,236	47,490	46,109
2. Special funds belonging to the Society	69,028	62,762	54,387
3. Funds administered by the Society	41,133	38,860	38,751
TOTAL ..	3,28,691	3,35,906	2,85,883

During the year Rs. 3,744 were received through admission fees, and three members compounded for their subscriptions to a total amount of Rs. 300. The grand total of Rs. 4,044, together with the grand total of Rs. 3,878 received under these two heads last year, making Rs. 7,922 in all, was as usual

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transferred to the Permanent Reserve. This was effected by a conversion, at the market rates, according to a Council decision of 1925, of investments belonging to the Temporary Reserve of the Working Balance (Government Paper, 3½%, to a face value of Rs. 9,500). The policy has been definitely adopted gradually to convert all investments belonging to the Temporary Reserve in a similar way, and to replace them in the future by fixed deposits, Savings Bank Deposits, and similar forms of investment, not subject to fluctuation in market price.

The Society received the usual sanctioned grants from the Government of Bengal as follows :—

For :	Rs.	Statement.
Journals	2,000	1
O.P. Fund No. 1	9,000	2
O.P. Fund No. 2	3,000	3
Sanskrit MSS. Fund	6,800	4
Total	20,800	

The Government of India annual grant of Rs. 5,000 for the Arabic and Persian Manuscript and Cataloguing Fund, which had expired on the 31st of March, 1924, and had not been renewed, was re-sanctioned during the year, with retrospective effect from the 1st of April, 1924. Payment was accordingly received during the financial year of Rs. 15,000, for the years 1924/25, 1925/26, 1926/27. (Statement No. 5.) The Society expressed its thanks to Government.

The income derived from advertising during the year was Rs. 5,778.

The temporary investments of Funds in War-bonds, Fixed deposits, and Savings Banks are shown in statements Nos. 20, 21, 22. An amount set aside for ear-marked expenditure is shown in statement No. 11.

Statement No. 17 gives the account of the amounts due to and by the Society for members' subscriptions, sales of publications, and contingent charges.

The Government securities shown in statement No. 19 are held in safe custody by the Imperial Bank, Park Street Branch. The appreciation of Government securities, during the year, on investments held, amounted to a total of Rs. 24,855. The depreciation on the face value decreased from Rs. 74,111 to Rs. 49,256.

The budget estimates for 1926 and the actuals for the year were as follows :—

Estimates :	Receipts.	Expenditure.
	Rs.	Rs.
Ordinary	48,000	48,000
Extraordinary	10,000	10,000
TOTAL ..	58,000	58,000

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Actuals:	Receipts.	Expenditure.
	Rs.	Rs.
Ordinary	50,847	46,430
Extraordinary	10,000	..
TOTAL ..	60,847	46,430

Of the excess of receipts over expenditure Rs. 4,044, derived from entrance fees and compounding fees, is not available for expenditure, having to be transferred to the Permanent Reserve. The extra income made available for work in connection with arrears in the publication of the Society's Journals, has still to be expended. The result is a net small surplus of about Rs. 373 on the year's working.

The income was within Rs. 1,200 of the estimates, the difference being accounted for by a re-allotment, during the year, of interest on the Society's investments to various funds, to which specific papers were allocated, to a total of about Rs. 1,365.

Expenditure kept closely to the budget estimates, with the exception of an excess of Rs. 654 for furniture, Rs. 1,162 for books, Rs. 185 for postage, Rs. 150 for insurance, all subsequently sanctioned during the year, whilst on the other hand, small savings were effected under various heads, and a substantial saving under the head of Journals. The latter saving during the year has, however, to be expended in the near future.

The Budget Estimates of probable expenditure have again been framed to meet demands under various heads based on vigorous activity in all departments of the Society's work. The receipts have been conservatively estimated.

No capital or extraordinary expenditure has been included in the Budget estimates. If any need for it arises during the ensuing year, it will form a subject of scrutiny and deliberation by Finance Committee and Council, and will be introduced as a special supplementary grant.

BUDGET ESTIMATE FOR 1927.

Receipts.

	1926. Estimate.	1926. Actuals.	1927. Estimate.
	Rs.	Rs.	Rs.
Interest on Investments	11,500	9,510	10,000
Advertising	6,000	5,778	6,000
Annual grant from Government of Bengal	2,000	2,000	2,000
Miscellaneous..	1,000	551	900
Carried over ..	20,500	17,839	18,900

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	1926. Estimate. Rs.	1926. Actuals. Rs.	1927. Estimate. Rs.
Brought forward ..	20,500	17,839	18,900
Members' Subscriptions	13,000	13,587	14,000
Compounding fees	..	300	..
Admission fees	..	3,744	..
To Publications by Publication Fund	8,000	11,000*	..
To Publications by unspent amount on Publications	..	..	10,000
To Publications by book sales and subs. to Jl. and Pr. and Memoirs	9,000	6,877*	8,000
To Proportionate share in general expenditure by various funds ..	7,500	7,500	7,500
TOTAL ..	58,000	60,847	58,400

Expenditure.

Salaries and Allowances ..	23,250	22,706	25,000
Commission	500	512	500
Stationery	1,250	1,287	1,500
Fan, light, telephone	600	563	600
Taxes	1,750	1,753	1,760
Postage	1,100	1,285	1,500
Freight	50	10	50
Contingencies	1,000	898	1,000
Petty repairs	1,000	343	250
Insurance	350	500	500
Menials' clothing	150	149	150
Office Furniture	1,000	1,654	1,000
Paintings	1,000	908	500
Building, repairs and upkeep ..	800	..	2,000
Provident Fund Share	500	341	500
Steel Shelving	..	..	1,500
Audit Fee	250	250	250
Books, Library	3,000	4,163	3,000
Binding, Library	2,000	2,067	2,000
Journal and Proceedings and Memoirs	16,000	5,087	12,000
Printing, Circulars	1,250	755	1,000
Contribution to I.S.C.	1,200	1,200	1,000
TOTAL ..	58,000	46,431	57,560

Publications.

Of the *Journal* and *Proceedings*, Vol. XXI (for 1925), two numbers were published during the year, aggregating 324 pages and two plates. A large amount of matter for the *Journal* is in type. The title pages and index for Vol. XX, were also published.

Of the *Memoirs* one number was published, Vol. VIII, No. 5, containing 60 pages text and 8 plates. Three further

* Transfer of securities to a nominal value of Rs. 11,000, market value Rs. 8,635, less Rs. 635 cash from proceeds of book sales.

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numbers of the *Memoirs*, aggregating about 450 pages, are in type.

The amount of print actually issued was below the annual average, but the amount in preparation was up to the average

The Proceedings of the 13th Indian Science Congress were issued in November (430 pages).

The Sanskrit MSS. Catalogue and the publications of the year in the *Bibliotheca Indica* are described elsewhere in the report.

During the year the long awaited complete catalogues and price-lists of the *Bibliotheca Indica* were at last issued and widely distributed. They describe the series in full detail in two sections, relating to Hindu and to Islamic culture, and contain 90 pages print.

The sales of our publications remained satisfactory during the year. The amount of literature sold, including subscriptions to our periodicals, came to nearly 10,000 rupees. Of this sum, however, only Rs. 7,500 was realised. During the ensuing year the methods of accountancy in the sales department must be thoroughly investigated.

The prosperity of the Society in point of numbers reacted unfavourably on the amount of attention that could be given by the office to its publishing activities. Our *Journal* is in arrears, and instead of making up lost ground, new delays occurred. Punctuality in the publication of its serials is a matter of vital importance to a Society like ours. It gives satisfaction to the members, establishes a reputation, and keeps old friends. Delays and arrears create justified dissatisfaction and irritation. With a view to making up old arrears in the production of our *Journal* a very large item was entered on the previous year's budget under the head of publications. Though the money was available we have only been able to use a small portion of it for lack of time to be devoted to press work. At present the annual averages of the publication work to be performed by the office are as follows:—

Bibliotheca Indica	2500 pages.
Journal	900 pages.
Memoirs..	250 pages.
Proceedings, Science Congress	400 pages.
Catalogues	600 pages.

Leaving out miscellaneous publications this means about 4650 pages of print to be produced annually, of which those relating to the *Journal* are made up of matter belonging to the most diverse branches of human learning consisting of small items with technical difficulties of illustration and script.

All this work has to be performed by an over-burdened office without the help of a special press expert or technical editor. Even the correspondence connected with it is in itself enormous. The administrative routine of placing the

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material before the Sectional Secretaries and the Publication Committee, and of instructing the Press, and obtaining and checking its estimates, constitutes already considerable labour. In order to effect an improvement in the condition of things and to speed up matters, extra help was engaged towards the end of the year to assist in the technical part of the press work. It is undesirable that it should remain impossible to spend the money available for publications awaiting issue for want of assistance It is the intention to utilise again, during the coming year, part of the publication grant for office help in connection with this work, instead of restricting it exclusively to the payment of the printer's bills. To curtail such expenditure would be false economy. Our publications must be brought up-to-date, be freed from arrears, and kept regular and punctual.

The Baptist Mission Press.

Under the capable superintendence of Mr. P. Knight the Baptist Mission Press continued to act as our chief printers and gave again invaluable assistance and the closest co-operation throughout the year.

Agencies.

Our European and Indian Agents remained unchanged. The book sales effected through them were considerable. The question of overhauling our methods of accountancy with some of them becomes, however, more and more urgent. The book-selling department is sufficiently important to be treated as a self-contained branch of our administration. It can and should be made not only self-supporting but remunerative. Business can never thrive on a merely passive response to enquiry.

Exchange of Publications.

During the year the following applications for an exchange with the Society's publications were considered by the Council.

		To be exchanged with:
1.	University of St. Joseph, Beyrouth ..	Journal.
2.	Marine Biological Station, Woods Hole, Mass., U.S.A.	Journal.

A request from the Public Library and Reading Room, Delhi, to be placed on the complimentary distribution list of the Society, was declined.

Meetings.

The General Meetings of the Society were held regularly every month, with the exception of the recess months of September and October.

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The time of meeting remained fixed at 5-30 p.m

The attendance remained almost stationary as compared with the previous year, averaging slightly under 20 members and over 3 visitors. The maximum attendance was in December, with 28 members and 10 visitors.

It may interest members to know that the total number of General Meetings on record as having been held by the Society since its inception, is 1334, of which 260 in the present century. There is a gap in the records for the the year 1789.

Six Meetings of the Medical Section were held during the year. The attendance was on a level with that of the year before.

Exhibits.

In the General Meetings a number of exhibits were shown and commented upon by the exhibitors. The following may be mentioned :—

R. B. Seymour Sewell : A natural pearl *in situ* in an oyster.
R. B. Seymour Sewell : An example of a sacred or left-handed chank shell.
R. B. Seymour Sewell : Specimens taken from the raised coral reef of Southern India.
The General Secretary : A photographic reproduction of a unique copy of an old Ahom chronicle ; some recent publications of interest.
Johan van Manen : A Tibetan maṇḍala ; and a Tibetan sin-burner, khādaka-ḍāka, or za-byed mkhaḥ-hgro.

In the General Meeting for April the Western Electric Company gave an interesting and highly successful demonstration of the working of their sound-amplifier apparatus for use in meeting rooms.

The bad accoustics of our lecture hall helped to make the demonstration a very convincing one.

General Lectures.

The remaining three General Lectures during the winter season 25/26 were successfully held before fairly numerous audiences of members and invited guests.

The details are as follows :—

G. T. Labey : Life aboard an East India Man towards the latter end of the seventh century. Illustrated with lantern slides. January 7th.

Johan van Manen : Some living problems of Buddhism. April 22nd.

R. B. Seymour Sewell : The Coral Atolls of Indian Seas. Illustrated with lantern-slides. June 16th.

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Rotary Club.

At the invitation of the Directors of the Rotary Club of Calcutta, the General Secretary addressed them at a luncheon meeting in June, on the subject of the Asiatic Society of Bengal and its history. Two local dailies devoted leaders to the lecture, showing a most gratifying interest in and appreciation of the Society and all it stands for.

Philology.

The philological activities of the year, in so far as not described under other headings, were the papers published in *Journal* or *Memoirs*, or read in the meetings.

There was an increase in the number of papers submitted. As in other branches of study there was great literary activity

Of the *Journal* two philological numbers were published, aggregating 324 pages and containing 22 articles. The contents have been described in this and previous reports, as having been read in the meetings.

The following papers were both read and published during the year :—

P. O. Bodding: A plea for a standardized system of writing the Muṇḍa or Kolarian languages.
W. Ivanow: Rustic poetry in the dialect of Khorasan.
Harit Krishna Deb: When Kurus fought Pāṇḍavas.
Harit Krishna Deb: The five-yearly yuga and the Saptarshi cycle.
Braja Lal Mukerjee: Atharva Veda, Kāṇḍa XV.

The following communications, not to be published subsequently, were made in the meetings :—

MM. Haraprasad Shastri, on Bhadra Yānā.
MM. Haraprasad Shastri, on General considerations concerning the Rāmāyaṇa.
MM. Haraprasad Shastri, on The Vishnupur Malla era.
Johan van Manen, on The Pali Text Society's Pali-English Dictionary.

Papers read in the General Meetings of the Society but not yet published were :—

M. Hidayat Hosain: The auto-bibliography of Mawlānā 'Abd Al Ḥaḳḳ Ad-Dehlavī.
Mohd. Abdul Aziz: The Deccan in the 15th century.
H. E. Stapleton: The late R. F. Azo, and M. Hidayat Hosain. Chemistry in 'Irāq and Persia in the Tenth Century, A.D.
A. S. Ramanatha Ayyar: The martyrdom of St. Thomas, the Apostle.
Sukumar Sen: The language of Aśvaghoṣa's Sāundarananda-Kāvya.
Bibhutibhusan Datta: Hindue values of π.
Braja Lal Mukherjee: Atharva Veda; Kāṇḍa XVI.
Mohammad Hamid: Remarks on Khan Saheb Abdul Wali's notes on archaeological remains in Bengal.
H. Hosten, S.J.: Fr. N. Pimenta's Annual Letter, Goa, December 21st, 1599.

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H. Hosten, S.J.: Fr. Pimenta, S.J., on Mogor, Goa, 1st December, 1600.
H. Hosten, S.J.: Fr. N. Pimenta's Annual of Margao, December 1st, 1601.
H. Hosten, S.J.: Three letters of Fr. Joseph de Castro, S.J., and the last year of Jahāngir. August 24, 1926.
H. Hosten, S.J.: Eulogy of Father Jerome Xavier, S.J., a Missionary in Mogor, 1549-1617.
H. Hosten, S.J.: Some letters of Fr. Jerome Xavier, S.J., to his family, 1593-1612.
H. Hosten, S.J.: Some notes on Bro. Bento de Goes, S.J.: 1583-*d.* 1607.
Mohini Mohan Chatterji. Brahmanism in Bengal.

Natural Science: Biology.

The output of biological papers submitted during the year was large. Unhappily, publication of them has been slow. In the nature of the case several of such papers require illustrations and if these are not satisfactorily prepared, delay is apt to be caused. This happened. As the time available in the office for editorial correspondence is very limited indeed, the immediate consequence was a retardation of progress. This is all the more to be regretted as the good suffer with the bad. The *Journal* is a bottle-neck through which everything has to pass in proper succession with pages and plates duly numbered. A plate once prepared with a definite sequence number holds up progress if the article belonging to it is for any reason to be kept back.

No biological number of the *Journal* was published during the year though there is ample material in hand to make up a substantial issue.

One substantial number (60 pages text, 8 full page plates) of the *Memoirs*, issued during the year, was devoted to a biological subject, by Paul Brühl and Kalipada Biswas, on the Algae of the Loktak Lake.

The following papers were read at the Monthly Meetings of the Society but have not yet been published :—

C. K. Krishnaswamy Pillai and V. S. Swaminathan: A note on the rockslides of the Western Ghat section, South India.
Harbans Lall Chhibber: The extinct iron industry of the neighbourhood of Mount Popa, Upper Burma, with notes on the microscopic study of the slags.
Harbans Lall Chhibber: The origin and mineral constitution of the late tertiary fossil wood of Burma.
S. L. Hora: A short note on the distribution and habits of *Balwantia Soleniformis* (Benson).
R. B. Seymour Sewell: Maritime Meteorology in Indian Seas.
S. L. Hora: Note on a hermaphrodite loach.
R. B. Seymour Sewell: A brief account of investigations into a case of sudden mortality among the fauna of the Indian Museum tank.
S. Ribeiro: A note on a simulid larva found associated with a may-fly nymph.
S. L. Hora: On the manuscript drawings of fish in the library of

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the Asiatic Society of Bengal. I, Fish drawings in the Mackenzie collection.

S. R. Bose: Artificial cultures of wood-rotting fungi common in forest areas.

T. V. Ramakrishna Aiyer: Notes on some Indian lepidoptera with abnormal habits.

Natural History: Physical Science.

No papers on physical science were published during the year or submitted for reading.

Anthropology.

During 1926 a great variety of Anthropological papers were newly contributed, to wit:—

P. C. Mahalanobis: Analysis of Race-Mixture in Bengal.

P. O. Bodding: A note on the 'Wild-people' of the Santals.

Johan van Manen: Some further notes on the 'Wild men' of Tibet and elsewhere.

C. de Beauvoir Stocks: Folk-lore and Customs of the Lap-chas of Sikhim.

J. H. Hutton: Diaries of two tours in the unadministered area east of the Naga Hills.

D. N. Majumdar: Marriage and betrothal amongst the Hos of Kolhan.

D. N. Majumdar: The Bigonial breadth of some Hos of Kolhan.

D. N. Majumdar: Death and connected ceremonies of the Hos of Kolhan and Singbhum.

Hem Chandra Das-Gupta: A few types of sedentary games prevalent in the Punjab.

Upendra Nath Brahmachari and Shyama Charan Brahmachari: Note on two pre-historic Neolithic stone implements found in a tank in Jamalpur (Monghyr).

Mohini Mohan Chatterji: Some Marriage Customs in Bengal.

Mohini Mohan Chatterji: A study of some Bengali Customs. I, Survivals of group-marriage. II, Mock-marriage.

They were presented in the monthly meetings. In the *Journal* no anthropological papers were published during the year.

The Rev. Bodding's second paper in the *Memoirs* on "Studies in Santal Medicine and connected Folk-lore" progressed well, 230 pages being printed off. The number will be ready for issue during the course of 1927, and will be a bulky publication of about 300 pages.

Medicine.

During the year six special meetings of the Medical Section were held, as detailed below:—

February. Speaker, Major R. N. Chopra, Subject, The Problem of the supply of medical relief in the rural areas in India. Followed by a general discussion.

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April. Speaker, Major H. W. Acton, Subject, On the principles to be applied in tests for a cure.

May. Speaker, Major K. K. Chatterji, Subject, The Study of cancer in India.

June. Speaker, Major V. B. Green-Armytage, Subject, Obstetrics and gynaecology in the days of the patriarchs.

September. Speaker, Major J. A. Shorten, Subject, Radium and the cure of cancer, including an account of a visit to the Curie Foundation, Paris.

November. Speaker, Major H. W. Acton, Subject, Neurasthenia in the tropics : its aetiology, causation, and treatment.

As usual the issue of those papers intended for publication will be or has been arranged for in the various Medical Journals.

Bibliotheca Indica.

Satisfactory progress is to be recorded for 1926.

Actually published were only two issues Nos. 1485/1486. They were of a bulk of 9 fascicle-units of 96 pages.

One was the final (double) fascicle of Prof. Jacobi's edition of Haribhadra's Samarāicca Kahā (Prakrit), and the other Mr. Ivanow's concise Descriptive catalogue of the Persian MSS. in the Curzon collection, 28 and 582 pages.

In the Islamic series five other works were continued as follows, with the progress during the year as noted against the titles :—

Ma'āṯhir-i-Raḥīmī, editor Dr. Hidayat Hosain, third and final volume, 400 pages printed.

Haft-Iqlīm, editors Khān Bahādur 'Abdul Muqtadir and A. H. Harley, 144 pages printed.

'Amal-i-Ṣāliḥ, or Shāh Jahān nāma, second volume, editor G. Yazdānī, 144 pages printed.

Ṭabaqāt-i-Akbarī, first volume, editor B. De, 120 pages printed.

Ṭabaqāt-i-Akbarī, first volume, translator B. De, 160 pages printed.

In addition work on Prof. Maḥfūzul Ḥaq's translation and edition of Dārā Shikūh's Majmua'ul Baḥrain was begun and the work was completely set up in type.

In the Sanskritic series six works were in hand during the year, with details and progress as follows :—

Kui Grammar, by the Rev. W. W. Winfield, 144 pages printed.

Śrī Kṛṣṇāvatāra-līlā, Kāshmīrī text and translation, by Sir George Grierson, 112 pages printed.

Vaikhānasa-gṛhya-sūtra, editor Prof. W. Caland, 145 pages printed, completing the text.

Nityācāra-pradīpa, editor MM. Sadāśiva Miśra, 208 pages printed.

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Vidhāna-pāriǰāta, editor Paṇḍit Īsvara Chandra Shāstri, 192 pages printed.

Śatapatha-Brāhmaṇa, kāṇḍa IX, 120 pages printed, completing the text of the volume, and of kāṇḍa XI, newly begun, 16 pages printed.

Three new works were taken up, being sanctioned during the year :—

Gṛhastha-ratnākara, editor MM. Kamala-kṛṣṇa Smṛti-tīrtha.

Pariśiṣṭaparvan or Sthavirāvalī-carita, revised edition, editor Prof. H. Jacobi.

First supplement to the concise catalogue of Persian Manuscripts in the Curzon collection, by Mr. Ivanow.

Actually printed, but not issued, during the year were 1906 pages, aggregating in bulk about 20 fascicle-units of 96 pages.

The work in the department remains overwhelming. Last year's remarks still apply, and will continue to apply for a long time to come.

The new policy of attempting wherever practicable to issue the numbers in complete volumes or at least in bulky issues of multiples of 96 pages, naturally led to a reduction in the number of issues actually published. The new method will ultimately simplify stock-keeping and accountancy to a very large extent; prevent loss, damage and waste; will be welcomed by librarians; and be helpful to students. Once it is applied to the majority of the works in hand the number of units annually issued will settle down to a new and reduced average.

It is interesting to note that in the 75 years of its existence the Bibliotheca Indica has progressed with an average production of about 3 works annually, of a bulk of about 25 fascicle-units of 96 pages, *i.e.*, about 2400 pages print each year.

The work of sorting out and bundling the old publications in the stock room is described under the heading 'office'.

A proper descriptive list of the Bibliotheca Indica was at last published during the year, in two sections, of works relating to Hindu and to Islamic culture. It was liberally distributed to the Members, the book-trade and libraries. Subsequent issues will permit the introduction in it of improvements, and the elimination of some errors. In a few years' time we may expect to have a reliable and thoroughly satisfactory description of the Bibliotheca Indica for the use of booksellers, students, libraries and bibliographers, a matter of considerable importance. The list as issued has already met with a very warm approval.

Catalogue of Sanskrit MSS.

MM. Haraprasad Shastri's great undertaking continued again to advance rapidly during the year.

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The printing of the whole body of volume V, describing the Purāṇa Manuscripts, including the indexes, was finished. It is a volume of 896 pages, describing 1080 numbers. Issue was delayed by work on an elaborate preface which is now half finished, and the volume should be ready for issue during 1927.

Vol. VI, describing the Vyākaraṇa Manuscripts was meanwhile taken in hand. By the end of 1926 already 80 pages had been printed off, 56 further pages were in proof, as also 95 galleys, covering the description of about 560 numbers.

Work in this department has now been unremittingly speeded up for three years in succession, but as the whole catalogue should describe about 12,000 items (in 12 or more volumes) of which hitherto 4,500 items have been disposed of, the end of the gigantic undertaking is not yet by any means in sight.

The Resident Pandit Aghornath Bhattacharya was at the end of the year confirmed in his post as the Shastri's assistant in the work on the catalogue.

During the year a rearrangement was made in the disposition of some of the MSS. and printed works in the Sanskrit department. A collection of over 2,000 Manuscripts was transferred from elsewhere to the Sanskrit room, place having been found for them by the transfer of an equal number of vernacular and Sanskrit prints to the general library shelves.

A number of paper MSS. were suitably repaired and rebound during the year.

Arabic and Persian Manuscripts, Search and Catalogue.

In this department the year's activities were of considerable importance. The work of foliating the collection of MSS. was completed. A second examination of the volumes had brought to light a number of volumes which had been overlooked before. This year over 85,000 additional leaves, making about 3,55,000 in all, have been foliated. Next, the systematic stamping of the volumes was taken up, and nearly 5,000 volumes were stamped with identification stamps in fixed places. In December this second manipulation was completed. Binding was continued. During the year 276 volumes were bound, making a total of 780 manuscript volumes bound since this activity was taken up on a regular basis towards the end of 1924. At least a thousand volumes are still in need of binding, and the rate of progress can scarcely be expected to be greater than about 300 annually, if proper attention and supervision are to be given to the work.

The work of repairing and pasting old, worm-eaten, or damaged MSS. proceeded altogether quicker and more skilfully than in previous years, and each volume bound, if in need of such attention, was thoroughly repaired before issue to the binder.

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The next work to be taken in hand is the segregation of printed works, both in type and lithographed, which are still mixed up with the earlier parts of the collection of MSS. A re-arrangement of the MSS. on the shelves, and a consequent re-numbering are also contemplated.

During the year a goodly number of new Arabic and Persian MSS. and a few Hindustani ones were acquired by purchase, in all 84 volumes, at a total purchase price of about Rs. 400. Several of the volumes, were again of more than common value and interest.

In November, Mr. Ivanow was sent on deputation to Lucknow for a brief period, to endeavour to collect Manuscripts locally. His visit was entirely successful and for an outlay of Rs. 1,200, all incidental expenses included, he acquired 160 volumes. These will be booked, incorporated and catalogued in 1927.

The second volume of the Concise Catalogue of Persian Manuscripts in the Society's Collections, by Mr. Ivanow, was published during the year. It is devoted to the "Curzon Collection," definitely so named, in supersession of the old informal designation of "Government Collection", in honour of Lord Curzon of Kedleston, under whose Viceroyalty and with whose support the collection was created. The volume describes 756 items, in 610 pages print, and was as warmly welcomed by experts as its predecessor. It was dedicated by the Council to Sir Denison Ross, in recognition of his former great services to the department. Mr. Ivanow also completed the copy of a first supplement to this second catalogue, describing all purchases and acquisitions accumulated till the end of 1926 since the closing of the text of his main catalogue. This supplement also contains residuals which have been found during a re-examination of the whole collection. It will describe about 150 items, and it is expected that it will be published during 1927, completing the description of all the Persian MSS. belonging to the Society, acquired and in its possession before the end of 1926.

In the meantime the Council has charged Mr. Ivanow with the preparation of a similar concise catalogue of the Society's Arabic MSS., and substantial progress has already been made with its preparation. This work will demand several years for its completion.

Several published catalogues of Persian and Arabic MS. collections were added to the set already in the possession of the Society as reference material for its own cataloguing activities. It is the intention to make and maintain this set as complete as practicable.

The staff of the department remained unchanged during the year.

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Numismatics.

With great regret news was received of the death of the Honorary Numismatist to the Society, Mr. R. O. Douglas, I.C.S. Arrangements for a successor have not yet been made.

The vacancy raises anew the question of the relations of the Society with the Numismatic Society of India, which are not well defined. During the year the whole position of the Society with regard to its Numismatic activities was reviewed. There are various points claiming attention: the relation of the A.S.B. with the Numismatic Society of India; the status of the coin collection lent *sine die* by the A.S.B. to the Indian Museum; the rights of the Society to receipt of Treasure Trove Coins; the method of dealing with the coin collection still held by the Society on its premises; the advisability of resuscitating the Society's independent Numismatic activities.

A sub-committee was appointed during the year to investigate these questions and to report.

Competent temporary outside help was secured and an extract was made, for the guidance of the Council, of the Numismatic records of the last twenty-five years in the archives, which was submitted to Council late in the year. This digest made the position much clearer but an important gap in the records was encountered. The missing documents were, however, re-traced just after the close of the year. It was, nevertheless, already felt that independent Numismatic activity by the Society should be revived. Definite action will probably be taken during 1927.

One Numismatic Supplement, No. 39 (for 1925), was prepared, but has not yet been issued. The arrangement of the plates made for some delay.

The whole question of the Society's Numismatic work is a very complicated one demanding great care and the closest attention for its satisfactory solution.

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[APPENDIX I.]

Membership Statistics.

(As calculated for December 31st, of each year.)

YEAR.	ORDINARY.								EXTRA-ORDINARY.			Grand Total Membership.	FELLOWS.	
	PAYING.				NON-PAYING.			Total Ordinary Members.	Centenary Honorary.	Associate.	Total.		Honorary.	Ordinary.
	Resident.	Non-Resident.	Foreign.	Total.	Absent.	Life.	Total.							
1901 ..	123	133	13	269	37	22	59	328	4	12	16	344	26	..
1902 ..	126	126	14	266	47	21	67	333	4	13	17	350	26	..
1903 ..	127	126	15	268	46	21	67	335	4	13	17	352	24	..
1904 ..	132	130	14	276	46	21	67	343	4	13	17	360	30	..
1905 ..	144	133	12	288	48	20	68	356	4	13	17	373	29	..
1906 ..	173	147	15	335	52	20	72	407	4	12	16	423	30	..
1907 ..	174	175	20	369	31	20	51	420	4	12	16	436	28	..
1908 ..	181	193	17	391	38	19	57	448	4	13	17	465	30	..
1909 ..	183	217	13	413	40	20	60	473	4	14	18	491	28	..
1910 ..	209	217	16	442	43	23	66	508	4	14	18	526	27	17
1911 ..	200	225	19	444	53	22	75	519	3	14	17	536	28	19
1912 ..	203	229	19	451	43	23	66	517	3	13	16	533	27	24
1913 ..	200	211	19	430	46	23	69	499	3	14	17	516	27	28
1914 ..	191	187	19	397	50	26	76	473	3	14	17	490	24	27
1915 ..	171	188	21	380	40	25	65	445	3	15	18	463	29	31
1916 ..	145	159	18	322	60	25	85	407	3	15	18	425	26	33
1917 ..	150	144	15	309	45	24	69	378	2	12	14	392	22	35
1918 ..	153	145	17	315	43	24	67	382	2	10	12	394	22	39
1919 ..	141	128	15	284	64	25	89	373	2	11	13	386	18	36
1920 ..	161	134	15	310	32	26	58	368	2	11	13	381	28	38
1921 ..	160	132	16	308	26	26	51	359	2	12	14	373	28	40
1922 ..	160	141	16	317	26	26	52	369	2	13	15	384	30	39
1923 ..	147	120	13	280	30	27	57	337	2	11	13	350	28	37
1924 ..	209	134	12	355	29	28	57	412	2	12	14	426	27	37
1925 ..	263	137	12	412	23	27	50	462	2	12	14	476	26	34
1926 ..	319	162	20	501	23	28	51	552	2	12	14	566	25	34

N.B.—Honorary Fellows were styled Honorary Members before 1911.

The closing total for 1923 has been adjusted to an initial total of 345 for 1924.

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[APPENDIX II.]

List of Publications issued by the Asiatic Society of Bengal during 1926.

(a) Bibliotheca Indica (New Series):

	Price. Rs.	A.	P.
No. 1485: Samarāicca Kahā, Vol. I, Fasc. 9 (2 units)	2	0	0
No. 1486: Descriptive Catalogue of Persian MSS. (Curzon Collection) Pp. XXVIII, 582	15	0	0

(b) Memoirs:

Vol. VIII, No. 5: Algae of the Loktak Lake ..	7	5	0

Title page and Index for Vol. VII. (Free to Members and Subscribers on application.)

(c) Journal and Proceedings (New Series):

Vol. XXI.

No. 1: Philological	6	6	0
No. 3: Philological	2	4	0

Title page and Index for Vol. XX. (Free to Members and Subscribers on application.)

(d) Miscellaneous:

Proceedings, Thirteenth Indian Science Congress ..	12	6	0

Price Lists for Free Distribution.

Catalogue of Works published in the *Bibliotheca Indica* relating to Hindu Culture.

Catalogue of Works published in the *Bibliotheca Indica* relating to Islamic Culture.

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[*Appendix III.*]

Abstract Statement

of

Receipts and Disbursements

of the

Asiatic Society of Bengal

for

the Year 1926

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STATEMENT No. 1.

1926. *Asiatic Society*

Dr.

To Establishment.

	Rs. As. P.	Rs. As. P.
Salaries and Allowances	22,706 4 9	
Commission	511 9 5	
		23,217 14 2

To Contingencies.

Stationery	1,286 9 6	
Fan and Light	361 9 0	
Telephone	201 1 5	
Tax	1,753 4 0	
Postage	1,285 4 2	
Contingencies	897 15 1	
Audit Fee	250 0 0	
Petty Repairs	343 2 0	
Insurance	500 0 0	
Menials' Clothing	149 0 0	
Furniture and Fittings	1,654 2 0	
Upkeep of Paintings	908 0 9	
Freight	10 0 0	
Provident Fund Share	314 7 0	
		9,941 6 11

To Library and Collections.

Books	4,162 14 8	
Binding	2,066 12 0	
		6,229 10 8

To Publications, etc.

Journal and Proceedings and Memoirs ..	5,086 14 3	
Printing Circulars, etc.	754 13 0	
Contribution to I.S.C.	1,200 0 0	
		7,041 11 3
Bad Debts written off	..	274 10 9
Less depreciation on Investments revalued on 31-12-1926 :—	..	
Carried over from 1925	62,894 13 10	
Less appreciation on 31-12-26 ..	21,356 0 0	
		41,538 13 10
Balance as per Balance Sheet	..	1,92,745 14 9
Total ..	..	2,80,990 2 4

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STATEMENT No. 1.

of Bengal. *1926.*

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account		2,18,530 3 0
By Cash Receipts.		
Interest on Investments	9,510 4 0	
Miscellaneous	416 3 9	
Government Allowance	2,000 0 0	
Advertising	5,778 5 0	
		17,704 12 9
By Personal Account.		
Members' Subscriptions	14,518 0 0	
Compounding Subscriptions	300 0 0	
Admission Fees	3,744 0 0	
Miscellaneous	134 5 0	
		18,696 5 0
By Transfer from Funds, etc.		
Proportionate Share in General Expenditure by various Funds	7,500 0 0	
Publication Fund from Book Sales and Subscription to Journal and Proceedings ..	6,877 6 3	
Publication Fund Reserve for Publications	11,000 0 0	
Refund Salary, Science Congress Clerk ..	200 0 0	
Proceeds on War Bond by Appreciation ..	481 7 4	
		26,058 13 7
Total ..		2,80,990 2 4

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STATEMENT No. 2.

1926. *Oriental Publication*

From a monthly grant made by the Government of Bengal for the publi-
(Rs. 500), and for the publication of Sanskrit

Dr.

To Cash Expenditure.

	Rs. As. P.	Rs. As. P.
Printing	5,599 3 2	
Editing	1,424 9 0	
		7,023 12 2
Proportionate Share in General Expenditure	..	3,000 0 0
Balance as per Balance Sheet	..	1,001 4 1
Total ..	..	11,025 0 3

STATEMENT No. 3.

1926. *Oriental Publication*

From a monthly grant made by the Government of Bengal of
Historical Interest

Dr.

	Rs. As. P.	Rs. As. P.
To Balance as per Balance Sheet ..	..	17,530 14 6
Total ..	..	17,530 14 6

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STATEMENT No. 2.

Fund, No. 1, in Account with A.S.B. *1926.*

cation of Oriental Works and Works of Instruction in Eastern Languages Works hitherto unpublished (Rs. 250).

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account		2,025 0 3
By Cash Receipts.		
Annual Grant		9,000 0 0
Total ..		11,025 0 3

STATEMENT No. 3.

Fund, No. 2, in Account with A.S.B. *1926.*

Rs. 250 for the publication of Arabic and Persian Works of (without remuneration).

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account		14,530 14 6
By Cash Receipts.		
Annual Grant, 1926-27		3,000 0 0
Total ..		17,530 14 6

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STATEMENT No. 4.

1926. *Sanskrit Manuscripts Fund*

From an annual grant of Rs. 3,200 made by the Government of Bengal by the Society for Government; and Rs. 3,600

Dr.

To Cash Expenditure

	Rs. As. P.	Rs. As. P.
Pension	120 0 0	
Printing	1,276 11 0	
Allowance	3,600 0 0	
		4,996 11 0
Proportionate Share in General Expenditure	..	2,000 0 0
To Balance as per Balance Sheet	..	14,834 10 3
Total ..	..	21,831 5 3

STATEMENT No. 5.

1926. *Arabic and Persian Manuscripts*

From an annual grant of Rs. 5,000 made by the Government of India for by the Society for Government; for the purchase of further Persian Manuscripts found

Dr.

	Rs. As. P.	Rs. As. P.
To Balance from last Account	..	12,963 13 7
To Cash Expenditure.		
Manuscripts Purchase	1,638 8 0	
Binding	466 0 0	
Cataloguing	3,000 0 0	
Books	104 5 2	
Contingencies	12 0 0	
		5,220 13 2
Proportionate Share in General Expenditure	..	2,500 0 0
Total ..	..	20,684 10 9

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STATEMENT No. 4.

Account, in Account with A.S.B. *1926.*

for the publication of the Catalogue of Sanskrit Manuscripts acquired from the same Government for research work.

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account		15,031 5 3
BY CASH RECEIPTS.		
Annual Grant for cataloguing, 1926-27		3,600 0 0
Annual Grant for preservation of Sanskrit Manuscripts, 1926-27		3,200 0 0
TOTAL ..		21,831 5 3

STATEMENT No. 5.

Fund Account, in Account with A.S.B. *1926.*

the cataloguing and binding of Arabic and Persian Manuscripts, acquired Manuscripts, and for the preparation of notices of Arabic and in various Libraries in India.

Cr.

BY CASH RECEIPTS.

	Rs. As. P.	Rs. As. P.
Annual Grant from the Government of India 1924-25 and 1925-26	10,000 0 0	
Annual Grant from the Government of India 1926-27	5,000 0 0	
		15,000 0 0
Balance as per Balance Sheet		5,684 10 9
TOTAL ..		20,684 10 9

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STATEMENT No. 6.

1926. *Barclay Memorial*

From a sum of Rs. 500 odd given in 1896 by the Surgeon encouragement of Medical

Dr.

To Cash Expenditure.

	Rs. As. P.	Rs. As. P.
Cost of two Memorial Medals	34 3 0	
Purchase of Rs. 100 F.V. of 3½ G. P. Note..	79 5 2	
		113 8 2
To Depreciation on Investments on 31-12-26		107 8 0
Balance as per Balance Sheet		545 2 8
Total ..		766 2 10

STATEMENT No. 7.

1926. *Servants' Pension Fund*

Founded in 1876 as the Piddington Pension Fund

Dr.

	Rs. As. P.	Rs. As. P.
To Depreciation, Investments revalued on 31-12-26		300 6 0
Balance as per Balance Sheet		..
Rs. 2,000, 3½% G. P. Notes ..	1,570 0 0	..
Accumulated Interest ..	36 5 10	
		1,606 5 10
Total ..		1,906 11 10

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STATEMENT No. 6.

Fund Account, in Account with A.S.B. *1926.*

General, I.M.S., for the foundation of a medal for the and Biological Science.

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account—		
Rs. 400, 3½% G.P. Notes, 1854-55 at face value	400 0 0	
Rs. 100, 3½% G.P. Notes, 1900-01 at face value	100 0 0	
Accumulated Interest	151 6 10	
		651 6 10
By Cash Receipts.		
Interest realized for the year		14 12 0
Rs. 100, 3½% G.P. Notes, at face value..		100 0 0
Total ..		766 2 10

STATEMENT No. 7.

Account, in Account with A.S.B. *1926.*

with Rs. 500 odd from the Piddington Fund.

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account—		1,857 11 10
By Cash Receipts.		
Interest realized for the year		49 0 0
Total ..		1,906 11 10

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STATEMENT No. 8.

1926. *Building Fund*

From a sum of Rs. 40,000 given by the Government of India proceeds of a portion

Dr.

	Rs.	As.	P.
To Depreciation, Investments revalued on 31-12-26	2,795	0	0
To Balance as per Balance Sheet .. .. (Rs. 10,205-0-0 + 1,057-6-6)	11,262	6	6
TOTAL ..	14,057	6	6

STATEMENT No. 9.

1926. Catalogue of Scientific Serial Pub-

Dr.

	Rs.	As.	P.
To Balance as per Balance Sheet	415	0	0
TOTAL ..	415	0	0

STATEMENT No. 10.

1926. International Catalogue of Scien-

Dr.

	Rs.	As.	P
To Balance as per Balance Sheet	4,424	7	8
TOTAL ..	4,424	7	8

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STATEMENT No. 8.

Account, in Account with A.S.B. *1926.*

towards the rebuilding of the Society's premises, and from the sale of the Society's land.

Cr.

			Rs.	As.	P.
By Balance from last Account (Rs. 13,000, 3½% G.P.N. and Rs. 602-6-6)	..	..	13,602	6	6
By Cash Receipts.					
Interest realized during the year	..	..	455	0	0
Total		..	14,057	6	6

STATEMENT No. 9.

lications, Calcutta, in Acct. with A.S.B. *1926.*

Cr.

			Rs.	As.	P.
By Balance from last Account ..	..	..	415	0	0
Total		..	415	0	0

STATEMENT No. 10.

tific Literature, in Account with A.S.B. *1926.*

Cr.

			Rs.	As.	P.
By Balance from last Account ..	..	..	4,424	7	8
Total		..	4,424	7	8

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STATEMENT No. 11.

1926. *Akbarnama Reprint*

From a sum set apart in 1923 for

Dr.

	Rs.	As.	P.
To Balance as per Balance Sheet	7,764	10	8
TOTAL ..	7,764	10	8

STATEMENT No. 12.

1926. *Provident Fund Ac-*

From contributions by the

Dr.

To CASH EXPENDITURE.	Rs.	As.	P.
Withdrawal of Contributions	21	3	0
Balance as per Balance Sheet	2,542	1	0
TOTAL ..	2,563	4	0

STATEMENT No. 13.

1926. *Sir William Jones Memorial*

From a sum gifted for the purpose

Dr.

	Rs.	As.	P.
To depreciation on Investments revalued on 31-12-26	645	0	0
Balance as per Balance Sheet (Rs. 2,355-0-0+94-12-0)	2,449	12	0
TOTAL ..	3,094	12	0

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STATEMENT No. 11.

Account, in Account with A.S.B. *1926.*

the reprint of the Akbarnama in England.

Cr.

	Rs. As. P.
By Balance from last Account	7,764 10 8
TOTAL ..	7,764 10 8

STATEMENT No. 12.

count, in Account with A.S.B. *1926.*

Staff and the Society.

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account		1,880 6 0
BY CASH RECEIPTS.		
Staff Contribution for the year	341 7 0	
A.S.B. Contribution for the year	341 7 0	
		682 14 0
TOTAL ..		2,563 4 0

STATEMENT No. 13.

Fund Account, in Account with A.S.B. *1926.*

by Dr. U. N. Brahmachari.

Cr.

	Rs. As. P.	Rs. As. P.
By Endowment 3½% G.P. Notes Rs. 3,000 face value..	3,000 0 0	
Interest realized	94 12 0	
		3,094 12 0
TOTAL ..		3,094 12 0

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STATEMENT No. 14.

1926. *Dr. N. Annandale Memorial*

From donations

Dr.

		Rs.	As.	P.
To depreciation on Investments revalued on 31-12-26		645	0	0
Balance as per Balance Sheet .. .. .. (Rs. 2,355-0-0+527-12-0)		2,882	12	0
	TOTAL ..	3,527	12	0

STATEMENT No. 15.

1926. *Permanent Library Fund*

From gifts

Dr.

	Rs.	As.	P.
To Balance as per Balance Sheet	2,050	0	0
TOTAL ..	2,050	0	0

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STATEMENT No. 14.

Fund Account, in Account with A.S.B. *1926.*

by subscription.

Cr.

	Rs. As. P.	Rs. As. P.
By Cash received	527 12 0	
By 3½% G.P. Notes Rs. 3,000 at face value ..	3,000 0 0	
		3,527 12 0
TOTAL ..		3,527 12 0

STATEMENT No. 15.

Account, in Account with A.S.B. *1926.*

received.

Cr.

	Rs. As. P.
BY CASH RECEIPTS.	
Donations realized during the year	2,050 0 0
TOTAL ..	2,050 0 0

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STATEMENT No. 16.

1926. *Publication Fund*

From sale proceeds

Dr.

To Cash Expenditure.

	Rs. As. P.	Rs. As. P.
Postage	575 5 6	
Printing	2,828 13 8	
		3,404 3 2
Books returned	..	103 8 0

To Transfer.

From Book Sales and Subscriptions to Journal and Proceedings during the year	6,877 6 3	
From Reserve	11,000 0 0	
		17,877 6 3
To depreciation on Investments revalued on 31-12-26	3,225 0 0	
To Exchange difference on Fixed Deposit	125 14 8	
		3,350 14 8
By Balance		
Rs. 15,000, 3½% G.P. Notes @ Rs. 78/8 ..	11,775 0 0	
Accumulated Cash Balance	12,057 11 5	
		23,832 11 5
Total ..		48,568 11 6

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STATEMENT No. 16.

Account, in Account with A.S.B. *1926.*

of publications.

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account..		39,083 13 5
By Cash Receipts.		
Cash Sale of Publications	650 14 9	
Interest realized on Fixed Deposit (London)	410 11 7	
Interest on Investments	910 0 0	
		1,971 10 4
By Personal Account.		
Credit Sale of Publications	6,049 3 9	
Subscriptions to Journal and Proceedings	1,464 0 0	
		7,513 3 9
TOTAL ..		48,568 11 6

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STATEMENT No. 17.

1926. *Personal*

Dr.

	Rs. As. P.	Rs. As. P.
To Balance from last Account	..	4,147 7 0
Advances for postage, etc.	..	959 14 3
Asiatic Society's Subscriptions, etc. ..	18,696 5 0	
Subscriptions to Journal and Proceedings and from Book Sales, etc., from Pub. Fund a/c	7,513 3 9	
		26,209 8 9
TOTAL ..		31,316 14 0

STATEMENT No. 18.

1926. *Fixed Deposit*

From a sum set aside to pay for the

Dr.

	Rs. As. P.
To Balance from last Account	12,459 10 0
Interest accrued on Fixed Deposit	410 11 7
	12,870 5 7
To Difference in Exchange rate	79 15 0
TOTAL ..	12,790 6 7

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STATEMENT No. 17.

Account. *1926.*

Cr.

	Rs.	As.	P.
By Cash Receipts during the year	27,616	11	3
Bad Debts written-off, A.S.B. a/c	274	10	9
Books Returned, Pub. Fund a/c	103	8	0

By Outstandings.	Amount due to the Society.			Amount due by the Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members ...	3,850	11	0	271	0	0
Subscribers ...	...	...	...	120	0	0
Bill Collector's Deposit ...	..	...	...	100	0	0
Miscellaneous ...	1,228	3	9	1,265	14	9
	5,078	14	9	1,756	14	9

..	3,322	0	0
TOTAL ..	31,316	14	0

STATEMENT No. 18.

Account, London. *1926.*

printing of the Kashmiri Dictionary.

Cr.

TO CASH EXPENDITURE.

	Rs.	As.	P.
Printing Charges	2,828	13	8
Balance as per Balance Sheet	9,961	8	11
TOTAL ...	12,790	6	7

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STATEMENT No. 19.

1926. *(1) Investment*

Dr.

		Rs. As. P.	Rs. As. P.
To Balance from last Account	..	2,74,700 0 0	2,63,606 3 10
To Receipts by Endowments	..	6,000 0 0	6,000 0 0
TOTAL	..	2,80,700 0 0	2,69,606 3 10

Face Value Rs.	FUNDS.	Rate @ Rs. %	31st December, 1926, Valuation. Rs.	A.	P.	Valuation as per Individual Account. Rs.	A.	P.	Less Depreciation on 31st December, 1926. Rs.	A.	P.
	ASIATIC SOCIETY OF BENGAL.										
	PERMANENT RESERVE.										
16,700	3½% G. Loan No. 155119, 1842-43	78/8/-									
1,00,000	3½% G. Loan No. 216811, 1854-55	78/8/-									
53,700	3½% G. Loan No. 216812, 1854-55	78/8/-									
5,000	3½% G. Loan No. 029544, 1879	78/8/-	1,46,559	8	0	1,75,606	13	10	29,047	5	10
1,000	3½% G. Loan No. 029548, 1879	78/8/-									
500	3% G. Loan No. 093715, 1896-97	67/8/-									
9,800	3½% G. Loan Part of No. 337428, 1865	78/8/-									
	TEMPORARY RESERVE.										
6,500	3½% G. Loan Part of No. 337428, 1865 ...	78/8/-									
26,000	3½% G. Loan No. 238816, 1900-01	78/8/-	45,137	8	0	57,629	0	0	12,491	8	0
25,000	3½% G. Loan No. 238369, 1900-01	78/8/-									
	PUBLICATION FUND.										
15,000	3½% G. Loan Part of No. 337428, 1865	78/8/-	11,775	0	0	15,000	0	0	3,225	0	0
	BUILDING FUND.										
13,000	3½% G. Loan Part of No. 337428, 1865	78/8/-	10,205	0	0	13,000	0	0	2,795	0	0
	PENSION FUND.										
2,000	3½% G. Loan Part of No. 029546, 1879	78/8/-	1,570	0	0	1,870	6	0	300	6	0
	BARCLAY MEMORIAL FUND.										
300	3½% G. Loan No. 170971, 1854-55	78/7/-									
100	3½% G. Loan No. 220763, 1854-55	78/8/-	392	8	0	500	0	0	107	8	0
100	3½% G. Loan No. 304677, 1900-01	78/8/-									
	SIR WILLIAM JONES MEMORIAL FUND.										
1,500	3½% G. Loan No. 1854-55 ...	78/8/-	2,355	0	0	3,000	0	0	645	0	0
1,500	3½% G. Loan No. 1900-01 ...	78/8/-									
	DR. ANNANDALE MEMORIAL FUND.										
3,000	3½% G. Loan No. 1842-43 ...	78/8/-	2,355	0	0	3,000	0	0	645	0	0
2,80,700			2,20,349	8	0	2,69,606	3	10	49,256	11	10

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STATEMENT No. 19.

Account (*Government Securities.*) *1926.*

Cr.

	Rs. As. P.	Rs. As. P.
Balance as per Balance Sheet ..	2,80,700 0 0	2,20,349 8 0
Less Depreciation on 31-12-26 ..	..	49,256 11 10
TOTAL ..	2,80,700 0 0	2,69,606 3 10

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STATEMENT No. 20.

1926. *(2) Investment*

Dr.

	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Account	35,000	0	0	35,572	0	10
To Appreciation W.B. revalued on 31st December, 1926	..			1,023	1	10
To Sale proceeds realized	..			481	7	4
TOTAL ..	35,000	0	0	37,076	10	0

TEMPORARY RESERVE.	31st December, 1926, Valuation.			Valuation as per War Bond Account.			Appreciation on 31st December, 1926.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Rs.20,000/- 5½% W. Bonds of 1928 @ Rs. 106/12/- %	21,350	0	0	20,326	14	2	1,023	1	10
TOTAL Rs. ...	21,350	0	0	20,326	14	2	1,023	1	10

STATEMENT No. 21.

1926. *(3) Investment Account*

For Staff

Dr.

	Rs.	As.	P.
To deposits during the year	2,563	4	0

STATEMENT No. 22.

1926. *(4) Investment Account*

Dr.

	Rs.	As.	P.
To deposit during the year, (Imperial Bank of India, Park Street Branch, Calcutta) ..	20,000	0	0
TOTAL ..	20,000	0	0

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STATEMENT No. 20.

Account (*War Bonds*). *1926.*

Cr.

	Face Value. Rs. As. P.	Market Price. Rs. As. P.
By Sale of W. Bonds Rs. 15,000 face value 3½ of G.P.N.	15,000 0 0	15,726 10 0
By Balance as per Balance Sheet ..	20,000 0 0	21,350 0 0
TOTAL ..	35,000 0 0	37,076 10 0

STATEMENT No. 21.

(*Savings Bank Deposit, Imperial Bank of India*). *1926.*

Provident Fund.

Cr.

	Rs. As. P.
By Balance as per Balance Sheet	2,563 4 0

STATEMENT No. 22.

(*Fixed Deposit, Imperial Bank of India*). *1926.*

Cr.

	Rs. As. P.
By Balance as per Balance Sheet	20,000 0 0
TOTAL ..	20,000 0 0

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STATEMENT No. 23.

1926. *Cash*

Dr.

	Rs. As. P.	Rs. As. P.
Asiatic Society of Bengal	17,704 12 9	
Oriental Publication Fund No. 1 ..	9,000 0 0	
Oriental Publication Fund No. 2 ..	3,000 0 0	
Sanskrit Manuscripts Fund Account ..	6,800 0 0	
Arabic and Persian Manuscripts Fund Account	15,000 0 0	
Barclay Memorial Fund Account ..	114 12 0	
Servants' Pension Fund Account ..	49 0 0	
Publication Fund Account	1,971 10 4	
Provident Fund Account	682 14 0	
Sir William Jones Memorial Fund Account	3,094 12 0	
Dr. N. Annandale Memorial Fund Account	3,527 12 0	
Permanent Library Fund Account ..	2,050 0 0	
Personal Account	27,616 11 3	
Building Fund Account	455 0 0	
Fixed Deposit (London) Account ..	2,828 13 8	
War Bond Account	15,726 10 0	
Indian Science Congress Account ..	4,309 3 0	1,13,931 15 0
TOTAL ..		1,13,931 15 0

STATEMENT No. 24.

1926. *Balance*

LIABILITIES.

	Rs. As. P.	Rs. As. P.
Asiatic Society of Bengal	1,92,745 14 9	
Oriental Publication Fund No. 1 ..	1,001 4 1	
Do. do. No. 2 ..	17,530 14 6	
Sanskrit MSS. Fund Account	14,834 10 3	
Barclay Memorial Fund	545 2 8	
Servants' Pension Fund	1,606 5 10	
Building Fund	11,262 6 6	
Catalogue of Scientific Serial Publication, Calcutta	415 0 0	
International Catalogue of Scientific Literature	4,424 7 8	
Akbarnama Reprint	7,764 10 8	
Provident Fund Account	2,542 1 0	
Sir William Jones Memorial Fund ..	2,449 12 0	
Dr. N. Annandale Memorial Fund ..	2,882 12 0	
Permanent Library Fund	2,050 0 0	
Publication Fund Account	23,832 11 5	2,85,888 1 4
War Bond Appreciation Account		1,023 1 10
TOTAL ..		2,86,911 3 2

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STATEMENT No. 23.

Account. *1926.*

Cr.

	Rs. As. P.	Rs. As. P.
By Balance from last Account	..	4,339 10 1
Asiatic Society of Bengal	46,430 11 0	
Oriental Publication Fund No. 1 ..	7,023 12 2	
Sanskrit Manuscripts Fund Account ..	4,996 11 0	
Arabic and Persian Manuscripts Fund Account	5,220 13 2	
Barclay Memorial Fund Account ..	113 8 2	
Publication Fund Account	3,404 3 2	
Provident Fund Account	21 3 0	
Personal Account	959 14 3	
Fixed Deposit (London) Account ..	410 11 7	
Investment Account	6,000 0 0	
Savings Bank Deposit Account ..	2,563 4 0	
Fixed Deposit (Calcutta)	20,000 0 0	
Indian Science Congress Account ..	8,767 5 11	
Balance	3,680 3 6	
		1,09,592 4 11
TOTAL ..		1,13,931 15 0

STATEMENT No. 24.

Sheet. *1926.*

ASSETS.

	Rs. As. P.	Rs. As. P.
Investments	2,20,349 8 0	
War Bonds	21,350 0 0	
Savings Bank Deposit	2,563 4 0	
Fixed Deposit (Calcutta)	20,000 0 0	
Fixed Deposit (London)	9,961 8 11	
Arabic and Persian MSS. Fund Account ..	5,684 10 9	
Personal Account	3,322 0 0	
Cash Account	3,680 3 6	
		2,86,911 3 2
TOTAL ..		2,86,911 3 2

We have examined the above Balance Sheet and the appended detailed accounts with the Books and Vouchers presented to us and certify that they are in accordance therewith, and set forth correctly the position of the Society as at 31st December, 1926.

PRICE, WATERHOUSE, PEAT & Co.,
Auditors,
Chartered Accountants.

Calcutta,
January, 28th, 1927.

SUNDER LAL HORA,
Honorary Treasurer.

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[APPENDIX IV.]

Abstract Proceedings Council, 1926.

(Rule 48 f.)

ANNUAL MEETING—

Annual Report. Approved.
No. 15. 25-1-26.

Annual Meeting. Arrangements approved.
No. 16. 25-1-26.

Annual Meeting in the local press. Record.
No. 6. 22-2-26.

ASSOCIATE MEMBERS—

Correspondence with Prof. S. R. Bose concerning his re-election as an Associate Member. Order: Record.
No. 4. 25-1-26.

Proposal of Dr. S. L. Hora to recommend Mr. Durgadas Mukherjee for election as an Associate Member. Accepted.
No. 7. 31-5-26.

Letter from Mr. Durgadas Mukherjee thanking for his election as an Associate Member of the Society. Record.
No. 1. 28-6-26.

BIBLIOTHECA INDICA—

Suggestions of Mr. B. L. Mukherjee to take in hand the publication of translations into Persian of Sanskrit literature made under Akbar and his successors. Resolved that the Council's sympathy with the principle of Mr. Mukherjee's proposals be expressed to him but that no action be taken until a specially qualified scholar is formally proposed, willing to undertake work in connection with the proposals.
No. 6. 29-3-26.

Report issue of *Bibliotheca Indica* sale catalogues. Record.
No. 5. 31-5-26.

Letter from Sir Denison Ross, thanking for the dedication to him of the Catalogue of Persian MSS. in the "Curzon Collection." Record.
No. 1. 26-7-26.

Proposal from Prof. H. Jacobi with reference to the publication of a new edition of Hemachandra's Parisista Parva in the *Bibliotheca Indica*. Accepted.
No. 2 (a). 30-8-26.

Proposal from MM. Kamalakṛṣṇa Smṛtitīrtha regarding the publication of the text of the Gṛhastha-ratnākara in the *Bibliotheca Indica*. Accepted.
No. 2 (b). 30-8-26.

Proposal from Mr. H. E. Stapleton for the publication of an Arabic chemical treatise in the *Bibliotheca Indica*. Order: Accept for publication on receipt of final and complete copy in press-ready condition.
No. 5. 4-10-26.

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BUILDING—

Suggestions Lt.-Col. N. F. Barwell in connection with the retiring room. Accepted.

No. 4. 4-10-26.

Recommendation Finance Committee No. 4 of 17-12-26. Informal consideration of next year's budget. Resolved to recommend to Council the inclusion of an annually recurrent item for upkeep of and repairs to building, with the suggestion that Rs. 2,000 annually may prove sufficient. Confirmed by Council.

No. 6. 20-12-26.

COMMITTEES—

Suggestion Mr. G. H. Tipper for the re-constitution of the Sir Ashutosh Mukherjee Memorial Committee. Order: The Committee to be re-constituted and to consist of Messrs. G. H. Tipper, H. E. Stapleton, U. N. Brahmachari and the General Secretary.

No. 6. 25-1-26.

Committees for 1926. Resolved that the standing Committees for 1926 be constituted as follows:

Finance Committee:

President.
Treasurer. } Ex-officio.
General Secretary.
Sir R. N. Mookerjee.
MM. Haraprasad Shastri.
P. C. Mahalanobis, Esq.
J. C. Mitra, Esq.
A. R. Bery, Esq.

Library Committee:

President.
Treasurer.
General Secretary.
Philological
Jt. Philological
Natural Science
Physical Science } Secretaries. } Ex-officio.
Anthropological
Medical
Library
Sir C. C. Ghose.
Percy Brown, Esq.

Publication Committee:

President.
Treasurer.
General Secretary.
Philological
Jt. Philological
Natural Science
Physical Science } Secretaries. } Ex-officio.
Anthropological
Medical
Library

No 12. 29-3-26.

Re-constitution of the Lease Committee preliminarily to deal with and scrutinise all matters regarding leases. Order: Committee to consist

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of the Treasurer, Sir C. C. Ghose, Mr. A. R. Bery and the General Secretary.
No. 10 (d). 25-4-26.

Resolved to invite Sir R. N. Mookerjee to accept membership on the Lease Committee.
No. 11 (a). 4-10-26.

Constitution of the Publication Committee. Mr Justice C. C. Ghose, Kt., to be co-opted as a member
No. 12 (a). 31-5-26

Constitution of the Insurance Committee. A sub-committee to consider, report and place definite proposals before the Council on the question of Fire Insurance of the Society's property. The Committee to consist of the President, Treasurer and General Secretary (*ex-officio*). Messrs. N. F. Barwell, N. Ottens and Thornton Jones. The Committe to be requested to endeavour to obtain advice from Captain B. A. Westbrook.
No. 1. 30-8-26.

COMPLIMENTARY—

Letter conveying the good wishes on behalf of H. M. the King of the Belgians. Order: Record.
No. 2. 22-2-26.

COUNCIL—

On motion by Mr. G. H. Tipper, unanimously resolved that the Council, in their last meeting before the Annual Meeting of the Society, put on record their thanks to the President, Sir Rajendra Nath Mookerjee, for the way in which he has served the true interests of the Society during the period of his Presidency.
No. 17. 25-1-26.

Signatures signifying formal acceptance of election of Council Members for 1926. Order: Record.
No. 1. 22-2-26.

Order: Council meeting tea. Present arrangements to continue; charges to be debited to contingencies.
No. 13. 22-2-26.

Letter from the Honorary Treasurer, intimating his impending absence from Calcutta for four or five weeks from about the 10th of May, 1926. Noted
No. 10 (c). 25-4-26.

Letter of thanks to Council from the President. Record.
No. 1. 26-4-26.

Letter from the Acting President, regretting absence from the Council meeting on account of his being in mourning over the death of his mother. The Council's condolences to be conveyed to Dr. U. N. Brahmachari.
31-5-26.

Recommendation Finance Committee No. 4 of 28-5-26. Officiating arrangements for Treasurer. Order: The General Secretary to officiate for the Treasurer during his absence. Resolved that the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society during the absence of Dr. S. L. Hora until the latter resumes his functions on return.
No. 8 (d). 31-5-26.

Report of return of Dr. S. L. Hora to Calcutta and his resumption of the duties of Honorary Treasurer. Record.
No. 15 (a). 28-8-26.

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Notice of absence from Calcutta of the Library Secretary. Order: General Secretary to officiate for Library Secretary during his absence.
No. 1. 4-10-26.

Resignation as Member of Council of Mr. P. C. Mahalanobis. Accepted.
No. 11 (c). 4-10-26.

Notice of absence from Calcutta Treasurer. Resolved : That in case and from date of notice of absence of Dr. S. L. Hora from Calcutta the General Secretary (Mr. Johan van Manen) be authorised to officiate as Honorary Treasurer to the Society until Dr. Hora resumes his functions on return.
No. 2. 4-10-26.

Resignation of the Anthropological Secretary. Resolved : That the Rev. P. O. Bodding be co-opted to the Council as Anthropological Secretary in the place of Mr. H. E. Stapleton, resigned.
No. 3. 4-10-26.

Letter from the Rev. P. O. Bodding thanking for his appointment as Anthropological Secretary. Record.
No. 1. 29-11-26.

Fixing date December Committee and Council Meetings. The 20th December, 1926.
No. 5. 29-11-26.

Informal consideration Composition of Council for 1927-28.
After discussion the following list of Candidates for nomination for next year's Council was placed before the meeting for consideration :

President :— Dr. W. A. K. Christie.
Vice-President :—Sir R. N. Mookerjee.
,, Dr. U. N. Brahmachari.
,, Sir Devaprasad Sarvadhikary.
,, Dr. E. H. Pascoe.
General Secretary :—Mr. Johan van Manen.
Treasurer :—Dr. S. L. Hora.
Phil. Secretary :—MM. H. P. Shastri.
Jt. Phil. Secretary :—Dr. M. Hidayat Hosain.
Nat. Hist. Secretary (Biology):—Major R. B. S. Sewell.
Nat. Hist. Secretary (Phys. Science) :—Dr. C. V. Raman.
Anthropological Secretary :—Rev. P. O. Bodding.
Medical Secretary :—Major R. Knowles.
Library Secretary :—Lt.-Col. N. F. Barwell.
Member of Council :—Mr. Justice Sir C. C. Ghose.
,, Mr. Percy Brown.
,, Mr. B. L. Mitter.
,, Dr. S. K. Chatterji.
,, Mr. J. H. Lindsay.
,, Mr. B. De.

Resolved : That the General Secretary do print and circulate to the Members of the Council the list of the Council as at present constituted, together with the new list placed before the Meeting, and provided with a blank column for additional names; that these lists shall be returned to the General Secretary within a week of date of issue, that a list be compiled of the candidates finally proposed and be placed before next Council Meeting to be voted upon.
No. 10. 29-11-26.

Council Nomination for 1927-28.
The General Secretary reported that 14 Council Members had returned the list of candidates circulated, duly signed and unanimously

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approved without any alternative suggestions. Resolved: That the proposed candidates be the Council's nominees for election to next year's Council.
No. 10. 20-12-26.

DONATIONS—

Donation from Count K. Ohtani of a sum of Rs. 1,000 to procure a mechanical apparatus for the Society for the reproduction of manuscripts. Resolved that the thanks of the Council be conveyed to the donor.
No. 4. 29-11-26.

EXCHANGES—

Proposal from Mr. H. E. Stapleton to exchange publications with the University of St. Joseph, Beyrouth. Order: Accept. Journal.
No. 5. 25-1-26.

Request for Exchange of Publications with the Marine Biological Laboratory, Woods Hole. Granted. Journal; to arrange for such exchange of back sets as can be effected.
No. 2. 31-5-26.

FELLOWS—

Letter from Dr. D. Hooper concerning his status as an Ordinary Fellow. Record.
No. 3. 25-1-26.

Report of Meeting of Fellows, January 6th, submitting the name of the Rev. P. O. Bodding to the Council for recommendation to the Society for election to Fellowship. Accepted.
No. 9. 25-1-26.

Letter of thanks from the Rev. P. O. Bodding for election as an Ordinary Fellow. Order: Record.
No. 3. 22-2-26.

Correspondence with Dr. D. Hooper concerning his Ordinary Fellowship. Record.
No. 3. 29-3-26.

Fellowship questions. Item No. 14 of Council dated 28-6-26.
Resolved that the complete file of papers connected with the matter be circulated with the minutes to the Members of Council
No. 14. 28-6-26.

Note in connection with the minutes of the Meeting of Fellows held on June 25th, 1926.
Resolved: That the Council has no jurisdiction to take any action in the matter.
No. 1. 9-7-26.

Note and counternotes appended to the minutes of the meeting of the Council held on June 28th, 1926.
Resolved that the notes having been withdrawn by agreement, no further action be taken in the matter.
No. 2. 9-7-26.

FINANCE—

Recommendation Finance Committee No. 4(d) of 22-1-26. Members in arrears with subscriptions. Order: Apply rules. Accepted by Council.
No. 10. 25-1-26.

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Recommendation Finance Committee No. 4 (c) of 22-1-26. Bad debts written off during the year 1925 on account of deaths, Rule 38, resignations, etc. Order: Sanctioned. Accepted by Council.
No. 10. 25-1-26.

Recommendation Finance Committee No. 4 (ii) of 23-4-26. List of Members in arrears with subscriptions. Order: The General Secretary first to attempt to recover the arrears through personal letters; if not effective, rules to be applied. Council Order: Confirm.
No. 6. 26-4-26.

List of members in arrears with subscriptions.
Resolved: That copies of the list be supplied to members of Council for friendly assistance and that the Treasurer be empowered to use his discretion in the application of the Rules.
No. 4. 26-7-26.

Budget for 1926. Order: Approved.
No. 14. 25-1-26.

Auditor's report on balance sheet for 1925. Record.
No. 8. 22-2-26.

Recommendation Finance Committee No. 4 (2a) of 19-2-26.
Investment of accumulated balance in the Provident Fund. Order: Deposit in the Imperial Bank's Savings Bank. Confirmed by Council.
No. 14. 22-2-26.

Recommendation Finance Committee No. 4 (2-b) of 19-2-26.
Method of deposit of the monthly staff contribution. Order: Deposit in the Imperial Bank's Savings Bank immediately on receipt. Confirmed by Council.
No. 14. 22-2-26.

Recommendation Finance Committee No. 4 (3) of 19-2-26. The question of apportioning the depreciation of investments to various funds. Order: Recommend to Council that depreciation calculated for each fund be adjusted in the accounts and shown in the Financial Statements regarding each fund. Confirmed by Council.
No. 14. 22-2-26.

Recommendation Finance Committee No. 4 (iv) of 19-2-26. The question of opening a separate account for the Permanent Reserve Fund. Order: Recommend to Council the opening of separate accounts for all major funds. Confirmed by Council.
No. 14. 22-2-26.

Recommendation Finance Committee No. 4 (v) of 19-2-26. The question of purchase of investments for the Permanent Reserve Fund. Order: Purchase from the temporary reserve at market value to the amount required. Confirmed by Council.
No. 14. 22-2-26.

Recommendation Finance Committee No. 5 of 23-4-26. Suggestion from the General Secretary for the adoption of additional Rules providing for the automatic composition for the payment of future subscriptions after 15 years, by additional quarterly subscription of Rs. 5 for the Resident and Rs. 3 for the Non-Resident and Foreign Members. Order: Approved; and after careful drafting of the proposed new Rules to be recommended to Council. Council Order: Hold over.
No. 6 (c). 26-4-26.

Recommendation Finance Committee No. 4 (i-3) of 23-4-26, and No. 6 of 28-5-26. The question of allocation of securities to various funds. Order: Three securities to the face value of Rs. 52,000 to

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be allocated to the Building and the Publication Funds. Confirmed by Council.
No. 8 (a). 31-5-26.

Recommendation Finance Committee No. 4 of 23-4-26 and No. 6 of 28-5-26. The question of apportioning the depreciation of investments of the Society. Order: (i) That the Government Funds administered by the Society be not depreciated; (ii) Other funds administered by the Society to be depreciated. Confirmed by Council.
No. 8 (a). 31-5-26.

Recommendation Finance Committee No. 8 of 28-5-26. Mr. J. C. Mitra placed before the meeting and desired it be recorded in the minutes that in his opinion, apart from other reasons, there was a strong case for accepting recommendation No. 4 (i) of 23-4-26 that the Government Funds administered by the Society should not be depreciated on the ground that the interest accrued on those investments had been credited to the general fund of the Society and not to those funds, which was a fair compensation for not depreciating them. Unanimously resolved to accept this view. Confirmed by Council.
No. 4 (a). 31-5-26.

Recommendation Finance Committee No. 4 (b) of 27-8-26. Enhanced rates for maintenance of fans by the Russa Engineering Works, Ld., from Rs. 5 to Rs. 7 per fan annually. Order: Ask for reduction to Rs. 6, and if not granted accept enhanced rates. Confirmed by Council.
No. 3. 27-8-26.

Recommendation Finance Committee No. 4 (i) of 22-10-26. Receipt 3½% G. P. Notes for Rs. 3,000 from the Treasurer of the Annandale Memorial Fund. Resolved to recommend to Council to authorise the Treasurer to endorse 3½% G. P. Notes (Nos. 195907, 195892 and 195893) aggregating Rs. 3,000 to the Imperial Bank of India, Park Street Branch, for purposes of safe custody.

Also resolved to recommend to Council to place on record by a formal resolution that the Treasurer of the Asiatic Society of Bengal is ex-officio Treasurer of the Annandale Memorial and Sir Asutosh Memorial Funds.

Accepted by Council with the following modification: that in the opinion of the Council, under the terms of Rule 52, the Treasurer of the Asiatic Society of Bengal is ex-officio Treasurer of the Annandale Memorial and Sir Asutosh Memorial Funds. Dissenting note recorded.
No. 1. 25-10-26.

Recommendation Finance Committee No. 4 (a) of 26-11-26. Supplementary grants for postage and insurance: Order: Recommend to Council the sanction of additional grants of Rs. 200 for postage and Rs. 150 for insurance. Accepted by Council.
No. 6. 29-11-26.

FURNITURE—

Report by the General Secretary of the purchase of a cabinet for preserving the Society's copper plates. Order: Record.
No. 12 (b). 31-5-26.

Installation additional Fan. Order: Approved.
No 8. 28-6-26.

Recommendation Finance Committee No. 4 (a) of 27-8-26. The question of purchase of a second typewriting machine. Order: Purchase a good machine meeting costs directly or by re-appropriation from Budget heads. Confirmed by Council.
No. 3. 30-8-26.

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Resolved that the General Secretary be authorised to purchase for the office an up-to-date duplicating machine.
No. 6. 4-10-26.

Recommendation Finance Committee No. 4 (c) of 26-11-26. Purchase of a Manuscript case. Order: To be purchased at a cost preliminarily estimated not to exceed Rs. 1,500. Confirmed by Council.
No. 6. 26-11-26.

GRANTS—

Letter from the Department of Education, Health and Lands, intimating sanction of the annual grant of Rs. 5,000 for the Arabic and Persian MSS. Department, for 1926-27. Order: Record. The Council's thanks to be conveyed to the Government.
No. 10 (b). 25-4-26.

Renewal of the Arabic and Persian Annual Grant from the Government of India for 1926-27 to 1928-29. Order: Record. The Society's thanks to be conveyed to the Government.
No. 4. 31-5-26.

Letters to and from the Government of India concerning the Arabic and Persian MSS. Grant. Order: Record.
No. 2. 28-6-26.

INDIAN SCIENCE CONGRESS—

Letter of thanks from the Indian Science Congress. Order: Record.
No. 1. 25-1-26.

Letter from the General Secretary, Indian Science Congress, sanctioning the appointment of a clerk at the expense of the Congress. Order: Record.
No. 2. 25-1-26.

Session next Indian Science Congress. Suitable letter to be written offering welcome to and support of the Congress if next meeting in Calcutta.
No. 2. 20-12-26.

Proceedings of the Indian Science Congress. The privilege to receive a gratis copy of the Proceedings by Members of the Asiatic Society of Bengal to be restricted to those who apply for a copy before the date of publication.
No. 3. 20-12-26.

INSURANCE—

Fire Insurance of Society's property. Circulate documents to the Council and request Mr. H. E. Stapleton to submit a memorandum on relative merits of fire protection appliances.
No. 9 (a). 26-7-26.

INVITATIONS—

Invitation to All-India Ahmadia Conference. Order: Record.
No. 2. 29-3-26.

Invitations to the Chemical Congress at Brussels, and to Ornithological Congress at Copenhagen. Dr. W. A. K. Christie to be invited for the Chemical Congress and Mr. G. H. Tipper and Dr. Baini Prashad to be requested to arrange for representation at Copenhagen, either by one of themselves or by a third party as proving most suitable.
No. 1. 29-3-26.

Invitation to the Society to send representatives to the Seventh Congress of Industrial Chemistry, and Centenary of Marcelin Berthelot

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to be held at Paris in October, 1927. Dr. W. A. K. Christie to be written to.
No. 10 (a). 25-4-26.

Invitation from the 7th Congress, Industrial Chemistry, Paris, 1927. Order: Record.
No. 2. 31-5-26.

Invitation to the General Secretary to lecture to the Rotary Club on the Society. Order: Record.
No. 6. 31-5-26.

Press reports and comments on lecture to the Rotary Club. Order: Record.
No. 4. 28-6-26.

Invitation to the Society to participate in the International Congress of Librarians at Prague, Czechoslovakia. Suitable action to be taken.
No. 5. 28-6-26.

KAMALA LECTURESHIP—

Representation on the special Selection Committee, Kamala Lectureship, Calcutta University. MM. Haraprasad Shastri to be the Council's Nominee.
No. 3. 29-3-26.

LECTURES—

Report next General Lecture. Date for next lecture, the 22nd April. Invitation to Major R. B. S. Sewell for the fourth lecture approved. Sometime in June or July.
No. 11. 29-3-26.

Visit of Sir Ronald Ross to India. The Medical Secretary to attempt to arrange for a visit and an address to the Society by Sir Ronald Ross.
No. 11 (e). 4-10-26.

General Lectures during the Winter season, 1926-27. Committee consisting of Messrs. G. H. Tipper, R. B. S. Sewell and Johan van Manen to make the necessary arrangements.
No. 11 (a). 29-11-26.

LIBRARY—

Library Committee No. 1 of 29-3-26. Progress report of work, by the Library Secretary. Recommendation: Approve. Confirmed by Council.
No. 14. 29-3-26.

REGULATIONS—

Library Committee No. 4 of 29-3-26.
On a proposal by the General Secretary, resolved to recommend to the Council to change Regulation No. 22 of the present Library Regulations, as follows:—
"A Meeting of the Library Committee, which shall include the Sectional Secretaries and *ex-officio* members, shall be held at least once a quarter. Books shall generally be purchased with the approval of the Library Committee obtained in meeting. The Library Secretary is, however, empowered to spend on his own responsibility up to Rs. 150 per mensem on books recommended which he considers should be obtained at once."
Confirmed by Council.
No. 14. 29-3-26.

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Library Committee No. 1 of 26-4-26.

Progress report of work by the Library Secretary. Recommendation: Approve. Confirmed by Council.

No. 7. 26-4-26.

Library Committee No. 2 of 29-3-26. General statement and proposals by the Library Secretary. Recommendation: Approve. Confirmed by Council.

No. 14. 29-3-26.

Library Committee, No. 4 of 29-3-26.

On proposal by the General Secretary, the adoption of the following conventions with regard to the manner of new purchases for the Library were recommended.

1. The Library Secretary shall receive either direct or through the Society's office all recommendations for the purchase of books.

2. The Library Secretary shall, after such consultation with the Sectional Secretaries and other experts as he judges advisable, amalgamate each month the title of books into two lists, one containing those which he recommends for purchase, and the other those of which he considers purchase inadvisable.

3. These lists shall be circulated to the Library Committee and considered in Committee.

4. The Office shall communicate to the Library Secretary each requisition received for the loan of a book not in the Library, and the Library Secretary shall enter their titles in one of the two lists mentioned under item No. 2.

5. Notwithstanding the prescription of item No. 2, the Library Secretary shall have a free hand in purchasing books not exceeding Rs. 15 in price within his spending power, subject to subsequent report to the Committee.

Confirmed by Council.

No. 14. 29-3-26.

Library Committee No. 2 of 30-8-26. Recommendation: Short list of new acquisitions to the Library to be sent to the Members about once a quarter. Confirmed by Council.

No. 4. 30-8-26.

Library Committee No. 3 of 29-11-26. Library Secretary's purchase recommendation of latest edition Encyclopædia Britannica, with supplements complete, thick paper edition, cost approximately £30-0-0, if possible good second-hand copy. Order: Accept. Confirmed by Council.

No. 7. 29-11-26.

Report Dr. S. L. Hora's binding of Zoological MSS. Order: Dr. Hora to be requested to continue his work on re-binding certain old MS. volumes.

No. 5. 20-12-26.

Library Committee No. 2 (a) of 20-12-26. Library Secretary's recommendation to subscribe anew to the "Journal des Savants." Order: Accept. Confirmed by Council.

No. 7. 20-12-26.

Library Endowment Fund—

Letter from Dr. S. L. Hora suggesting the inauguration of a "Permanent Library Endowment Fund." Accept donations with thanks to the donors; Mr. Justice C. C. Ghose, Kt., and Lt.-Col. N. F. Barwell to draft an appeal to be circulated to the general body of members for further donations.

No. 3. 29-11-26.

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Recommendation Finance Committee No. 4 (b) of 26-11-26. Opening of a new Permanent Library Endowment Fund. Resolved to accept the donations received for the institution of a Permanent Library Endowment Fund. Confirmed by Council.

No. 6. 29-11-26.

Library Committee No. 2 (b) of 20-12-26. Statement by Mr. Justice C. C. Ghose, Kt., regarding the appeal for a Permanent Library Endowment Fund framed by Lt.-Col. N. F. Barwell. Recommended that the appeal be printed and sent out to all the Members of the Asiatic Society of Bengal. Confirmed by Council.

No. 7. 20-12-26.

MANUSCRIPTS—

The question of naming the Society's so-called Government Collection of Persian and Arabic MSS. Resolved to name as the "Curzon Collection" the collection of Arabic and Persian MSS. hitherto informally referred to as the Government Collection, in commemoration of the fact that Lord Curzon as Viceroy first sanctioned the scheme and grants in connection with the collection.

Further resolved that the first volume to be published of the Catalogue of the Persian MSS. in the collection, now in the press, be dedicated by Council to Sir Denison Ross in commemoration of the fact that he originated the scheme for this collection.

No. 11. 22-2-26.

MEMORIALS—

Report of the Annandale Memorial Committee. Order: Record.

No. 9. 29-3-26.

Recommendation Honorary Treasurer to pass a resolution authorising him to proceed to the investment of the assets of the Annandale Memorial Fund. Resolved that the Honorary Treasurer be authorised to proceed to the investment of part of the amount available in the Annandale Memorial Fund in 3½% Government paper to the face value of Rs. 3,000.

Further resolved that the Treasurer be authorised to endorse to the Imperial Bank of India, Park Street Branch 3½% Government paper to an aggregate face value of Rs. 3,000 as per details to be furnished by the Treasurer after purchase.

No. 2. 26-7-26.

Recommendation Dr. S. L. Hora for the re-constitution of the Annandale Memorial Committee. Re-constituted Committee to consist of the three ex-officio Members, President, Treasurer, and General Secretary, and in addition Major R. B. S. Sewell.

No. 3. 26-7-26.

Report of Sir Asutosh Memorial Committee. Order: Accept. Instructions as to size of bust and information as to its proposed placement to be conveyed to the sculptor together with the commissioning letter.

No. 8. 29-3-26.

Mr. Harold J. Youngman's clay model bust of Sir Asutosh Mukherjee. Order: Approved.

No. 4. 20-12-26.

Recommendation Finance Committee No. 4 (4) of 23-4-26 and No. 7 of 28-5-26. Purchase of new security for the Barclay Memorial Medal Fund. Resolved that a new Government paper to the face value of Rs. 100 be purchased and that the Treasurer of the Society be authorised to sign the necessary documents for this purpose on behalf of the Society.

No. 8 (c). 31-5-26.

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Suggestions from Dr. S. L. Hora regarding the Barclay Memorial Medal Committee regulations. To be considered by the Annandale Memorial Medal Committee.

No. 9 (b). 28-6-26.

Letter from Dr. U. N. Brahmachari offering Government 3½% Paper, to a face value of Rs. 3,000, to the Society for the institution of the periodical award of a medal to be named after Sir William Jones, with suggestions as to details of the award and rules to be framed regarding it. Resolved: to accept the offer with thanks and to constitute, as suggested by Dr. Brahmachari, a committee to frame rules and work out details, to consist of Sir Ewart Greaves, Sir C. C. Ghose, Major R. B. S. Sewell, the General Secretary, and in addition Major H. W. Acton, instead of Dr. W. A. K. Christie who is at present absent from India. Resolved also to report the gift to the next Ordinary Monthly Meeting of the Society.

No. 10 (e). 25-4-26.

Recommendation Finance Committee No. 4 of 25-6-26. Resolved: To recommend to Council to authorise the Treasurer to endorse 3½% Government Paper (Nos. 292707, 285807 and 188719) aggregating Rs. 3,000 to the Imperial Bank of India, Park Street Branch. Confirmed by Council.

No. 10. 28-6-26.

MISCELLANEOUS—

Letter of thanks from the Mining and Geological Institute of India for the use of the Hall on January 22nd. Order: Record.

No. 4. 22-2-26.

Report on sale offer of two copper grants.

The General Secretary reported that recently two interesting copper-plates had been offered for sale to the Society which in consequence of delay in formal consultation with various officers of the Council, had been sold to others pending negotiations, and requested the Council for an expression of opinion for his future guidance in similar circumstances.

Council expressed their opinion that a certain amount of discretion should be allowed to the General Secretary to take immediate action, after consultation with the President, the action to be reported to Council for confirmation.

No. 6. 22-2-26.

Report on Membership: Number of Ordinary Members having passed 500 during the month. Order: Record.

No. 7. 29-3-26.

Correspondence with Mr. Whitehead. Order: Record.

No. 3. 28-6-26.

Elections during recess months. In future, elections by Council in the recess month of August to take effect from the first Monday in September so as to permit the operation of the clause in Rule 18 regarding elections in the last month of any quarter.

No. 6 (a). 30-8-26.

General Secretary's Report on a find amongst the archives of the Society of photographs of old and distinguished members, which have been suitably framed for hanging in the retiring room. Order: Record.

No. 15 (b). 28-8-26.

Proposal from Mr. Justice C. C. Ghose, Kt., to invite the Hon'ble Justice Sir George C. Rankin, Chief Justice of Bengal, to join the Society. Order: Accept.

No. 11 (ii). 20-12-26.

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NUMISMATICS—

The General Secretary to arrange for the putting in order of, digest of, and report on, the documents and materials regarding the history and position of the Society in the matter of Treasure Trove Coins, relations with the Numismatic Society of India, and generally all questions regarding its numismatic activities, rights and possessions. Special outside help to be engaged for the purpose at a total cost not exceeding Rs. 300. The greatest expedition to be exercised to obtain a final report at the earliest date possible.

No. 7. 30-8-26.

Report regarding the position of the Society in the matter of Treasure Trove Coins, its relation with the Numismatic Society of India, and generally its numismatic activities, rights, possessions, etc. The report to be placed before the special Numismatic Committee for opinion and report to Council on or before January, 1927.

No. 6. 4-10-26.

OBITUARY—

Obituary notice of M. W. T. Brigham. Order: Record.

No. 2. 26-4-26.

PATRONS—

His Excellency the Viceroy's acceptance of Patronship of, and visit to, the Society. Order: Record. Reception to be without formalities, no academical costumes nor official robes.

No. 1. 20-12-26.

PRESENTATIONS—

Presentation by Mr. A. F. M. Abdul Ali of copies of historical documents connected with the A.S.B. Order: Record with thanks to Mr. Abdul Ali.

No. 4. 29-3-26.

Presentation of a book on "The Bengali Language" by its author Dr. Suniti Kumar Chatterji. Congratulatory letter to be sent to Dr. Chatterji.

No. 11 (b). 4-10-26.

Presentation to the Society by the Assam Government of a copy of a photographic reproduction of a rare Ahom Manuscript. Special letter of thanks of the Council to be addressed to the Assam Government.

No. 2. 29-11-26.

Presentation by the Director and Staff of the Zoological Survey of India, Indian Museum, Calcutta, of a portrait in oils of the late Dr. N. Annandale. Accepted with thanks.

No. 15 (c). 28-8-26.

PUBLICATION—

Publication Committee No. 1 of 25-1-26.

Letter from Mr. B. P. D. Mitter, requesting the Society to undertake the publication of a reprint of his pamphlet on the genealogy of the Mitters. Order: Decline. Confirmed by Council.

No. 12. 25-1-26.

Regarding a new edition of Mahavyutpatti. Mr. Johan van Manen to undertake completion with necessary re-edition and re-arrangement of Csoma de Körös' Mahavyutpatti in the Memoirs, Vol. IV.

No. 2 (c). 30-8-26.

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REQUESTS—

Request from the Rotary Club for the use of the Hall on February 8th. Order: Action approved.
No. 5. 22-2-26.

Request for loan of Hall to Rotary Club on May 26th. Order: Action approved.
No. 3. 31-5-26.

Request from Mr. S. M. Arthur, to be enrolled as an Honorary Member of the Society. Standard reply to be sent.
No. 7. 22-2-26.

Request from the President, Sarasvat Sanmilan Mandir, Uttarpara, for loan of books and pictures belonging to the Society. Order: Decline.
No. 3. 26-4-26.

Request from Mr. Nelson Wright for permission to utilise, for reprint, matter published by him in the Society's Journal. Order: Grant permission.
No. 6. 28-6-26.

Request from Public Library, Delhi, to supply gratis the Society's publications. Order: Decline.
No. 7. 28-6-26.

Request from the Calcutta School of Music for the use of the Society's Hall for their summer concerts of classical music. Order: Decline.
No. 15 (d). 28-8-26.

Request from the Director, Zoological Survey of India, to be allowed to make copies of certain illustrations from Vol. I of Hamilton-Buchanan's zoological drawings. To be granted, pending circulation of request in writing.
No. 5 (b). 25-10-26.

Request from Mr. J. N. Becker for the use of Society's Hall for a constituting meeting of the Rationalist Society. Declined.
No. 11 (d). 4-10-26.

Request from Dr. S. L. Hora to be allowed to incur expenditure on measures to clear up certain questions regarding old zoological drawings in the possession of the Society. Granted. Remuneration not to exceed expenditure granted for similar research with regard to Numismatics.
No. 11 (b). 29-11-26.

STAFF—

Recommendation Finance Committee No. 4 (b) of 22-1-26. Increment, Staff Salaries. Order: Scale increment to be sanctioned as recommended by the General Secretary. Confirmed by Council.
No. 10. 22-1-26.

Leave to Mr. Ivanow. Order: Three months' leave granted on full pay.
No. 10. 22-2-26.

The question of the appointment of a Head Clerk. A Committee consisting of the President, Treasurer and General Secretary to make recommendations to next Council meeting.
No. 12. 22-2-26.

Report applications for the post of Head Clerk. Order: Noted.
No. 10. 29-3-26.

Recommendation appointment Head Clerk. Order: Adopted.
No. 5. 26-4-26.

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The question of Pujah holidays and advance to staff. To be arranged by the General Secretary and Treasurer.

No. 11 (f). 4-10-26.

Recommendation Finance Committee No. 4 (ii) of 22-10-26. Application from Pandit Aghornath Bhattacharyya. Order: That Pandit Aghornath Bhattacharyya, who had been performing on probation the duties of cataloguing Pandit since the beginning of the year to the entire satisfaction of MM. Haraprasad Shastri, be confirmed in his appointment from January 1st, 1927, in the grade 75-5-125. Confirmed by Council.

No. 1. 22-10-26.

VISITS—

The Chairman in opening the Council Meeting, reported on his visit to the Royal Hungarian Academy, and outlined a scheme for receiving a liaison Member from that Institution. Resolved to await further correspondence.

29-11-26.

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List of
Patrons,
Officers, Council Members, Members,
Fellows and Medallists
of the
Asiatic Society of Bengal,

On the 31st December, 1926.

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PATRONS OF THE ASIATIC SOCIETY OF BENGAL.

1926	..	**H. E. Baron Irwin, of Kirby-under-Dale, G.M.S.I., G.M.I.E., Viceroy and Governor-General of India.**
1927	..	**H. E. Colonel Sir Francis Stanley Jackson, P.C., G.C.I.E., Governor of Bengal.**

1916–1921	..	Lord Chelmsford, P.C., K.C.M.G., G.C.M.G., G.M.S.I., G.M.I.E., G.B.E.
1917–1922	..	Earl of Ronaldshay, P.C., G.C.S.I., G.C.I.E.
1921–1926	..	Earl of Reading, G.C.B., P.C., G.C.V.O., K.C.V.O., G.B.E.
1922–1927	..	Earl of Lytton, P.C., G.C.I.E.

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OFFICERS AND MEMBERS OF COUNCIL OF THE ASIATIC SOCIETY OF BENGAL DURING THE YEAR 1926.

Elections Annual Meeting.

President.

G. H. Tipper, Esq., M.A., F.G.S., M.Inst.M.M., F.A.S.B.

Vice-Presidents.

Sir R. N. Mookerjee, K.C.I.E., K.C.V.O.
Sir Devaprasad Sarvadhikary, Kt., C.I.E., C.B.E., M.A., L.L.D.
Rai Upendra Nath Brahmachari, Bahadur, M.D., M.A., Ph.D., F.A.S.B.
Major H. W. Acton, M.R.C.S., L.R.C.P., I.M.S.

Secretaries and Treasurer.

General Secretary :—Johan van Manen, Esq.
Treasurer :—Sunder Lal Hora, Esq., D.Sc.
Philological Secretary :—Mahāmahopādhyāya Haraprasad Shāstrī, C.I.E., M.A., F.A.S.B.
Joint Philological Secretary :—Shamsu'l 'Ulamā Mawlawī Hidāyat Hosain, Khan Bahadur, Ph.D., F.A.S.B.
Natural History Secretaries. { Biology :—Major R. B. S. Sewell, M.A., M.R.C.S., L.R.C.P., F.L.S., F.Z.S., I.M.S., F.A.S.B. / Physical Science :—C. V. Raman, Esq., M.A., D.Sc., F.R.S., F.A.S.B.
Anthropological Secretary :—Rev. P. O. Bodding, M.A. (Christ.), F.A.S.B.
Medical Secretary :—Major R. Knowles, B.A., M.R.C.S., L.R.C.P., I.M.S.
Library Secretary :—Lt.-Col. N. F. Barwell, M.C., M.A., Barrister-at-Law.

Other Members of Council.

Hon'ble Mr. Justice C. C. Ghose, Kt., Barrister-at-Law.
Percy Brown, Esq., A.R.C.A.
B. L. Mitter, Esq., M.A., B.L., Barrister-at-Law.
Suniti Kumar Chatterji, Esq., M.A., D.Lit. (London).
Pramatha Nath Banerjee, Esq., M.A., B.L.

APPOINTMENTS AND TRANSFERS DURING THE YEAR.

Dr. U. N. Brahmachari (Acting President) from 8-4-26 to 5-11-26 *vice* Mr. G. H. Tipper, absent.
Sir R. N. Mookerjee (Acting President) for December *vice* Mr. G. H. Tipper, absent.
Rev. P. O. Bodding (Anthropological Secretary) from 1-11-26 *vice* Mr. H. E. Stapleton, resigned.
Mr. P. C. Mahalanobis, resigned in September.
Mr. Johan van Manen (Acting Treasurer) from 15-5-26 to 30-6-26 *vice* Dr. S. L. Hora, absent.
Mr. Johan van Manen (Acting Library Secretary) for September, *vice* Lt.-Col. Barwell, absent.

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OFFICERS AND MEMBERS OF COUNCIL OF THE ASIATIC SOCIETY OF BENGAL ELECTED FOR THE YEAR 1927.

President.

W. A. K. Christie, Esq., B.Sc., Ph.D., M.Inst.M.M., F.A.S.B.

Vice-Presidents.

Sir R. N. Mookerjee, K.C.I.E., K.C.V.O.
Rai Upendra Nath Brahmachari, Bahadur, M.D., M.A., Ph.D., F.A.S.B.
Sir Devaprasad Sarvadhikary, Kt., C.I.E., C.B.E., M.A., L.L.D.
E. H. Pascoe, Esq., M.A., Sc.D., D.Sc., F.G.S., F.A.S.B.

Secretaries and Treasurer.

General Secretary :—Johan van Manen, Esq.
Treasurer :—Sunder Lal Hora, Esq., D.Sc.
Philological Secretary :—Mahāmahopādhyāya Haraprasad Shāstrī, C.I.E., M.A., D.Litt., F.A.S.B.
Joint Philological Secretary :—Shamsu'l 'Ulamā Mawlawī Hidāyat Hosain, Khan Bahadur, Ph.D., F.A.S.B.
Natural History Secretaries. { Biology :—Major R. B. S. Sewell, M.A., M.R.C.S., L.R.C.P., F.L.S., F.Z.S., I.M.S., F.A.S.B. / Physical Science :—C. V. Raman, Esq., M.A., D.Sc., F.R.S., F.A.S.B.
Anthropological Secretary :—Rev. P. O. Bodding, M.A. (Christ.), F.A.S.B.
Medical Secretary :—Major R. Knowles, B.A., M.R.C.S., L.R.C.P., I.M.S.
Library Secretary :—Lt.-Col. N. F. Barwell, M.C., M.A., Barrister-at-law.

Other Members of Council.

Hon'ble Mr. Justice C. C. Ghose, Kt., Barrister-at-Law.
B. L. Mitter, Esq., M.A., B.L., Barrister-at-Law.
Percy Brown, Esq., A.R.C.A.
Suniti Kumar Chatterji, Esq., M.A., D.Lit. (London).
J. H. Lindsay, Esq., I.C.S., M.A., J.P.
B. De., Esq., M.A., I.C.S., (retired).

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ORDINARY MEMBERS.

R=Resident. N=Non-Resident. A=Absent. L=Life Member.
F=Foreign Member.

An Asterisk is prefixed to the names of the Ordinary Fellows of the Society.

Date of Election.		
6-5-25	N	**Abbasi,** MOHAMMAD AMIN, *Special Arabic Lecturer, Chittagong Madrasah.* Chittagong.
5-4-22	R	**Abdul Ali,** ABUL FAIZ MUHAMMAD, M.A., M.R.A.S., F.R.S.L., F.R.G.S., F.R.H.S. 3, Turner Street, Calcutta.
3-3-09	R	**Abdul Latif,** SYED, KHAN BAHADUR, B.A., B.L., *Asst. Secretary to the Government of Bengal, Revenue Dept., Writers' Buildings.* 32/1, Upper Circular Road, Calcutta.
2-11-25	N	**Acharya,** PARAMANANDA, B.SC., *Archæological Scholar.* Mayurbhanj State, Baripada.
2-3-21	R	**Acton,** HUGH WILLIAM, M.R.C.S., L.R.C.P., MAJOR, I.M.S. School of Tropical Medicine and Hygiene, Central Avenue, Calcutta.
7-12-25	N	**Afzal,** SYED MOHAMAD, KHAN BAHADUR, *Offg. Civil Surgeon, Bihar and Orissa Medical Service.* P.O. Mahendru, Patna.
2-3-21	R	**Agharkar,** SHANKAR PURUSHOTTAM, M.A., PH.D., F.L.S., *Professor of Botany, University College of Science.* 35, Ballygunge Circular Road, Calcutta.
5-11-24	R	**Ahmed,** HAFIZ NAZIR, SHAMSU'L 'ULAMĀ, KHAN SAHIB. 212/1, Linton Street, Entally, Calcutta.
6-6-17	N	**Aiyangar,** K. V. RANGASWAMI, RAO BAHADUR, *Principal, H. H. The Maharaja's College of Arts.* Trivandrum, Travancore.
6-12-26	N	**Aiyangar,** S. KRISHNASWAMI, M.A., PH.D., M.R.A.S., F.R. HIST.S., *Professor, University of Madras.* "Srijayavasam," 1, East Mada Street, Mylapore, Madras, S.
7-1-20	N	**Aiyer,** S. PARAMESVARA, M.A., B.L., M.R.S.L., M.F.L.S., M.E.I.A., KAVITILAKA, *Secretary to the Government of Travancore.* Trivandrum, Travancore.
4-4-23	R	**Alker,** A., *Merchant.* 4, Bankshall Street, Calcutta.
7-6-26	N	**Anbian,** A. JOHN, B.A., M.P.E S., *Manager and Correspondent, Principal, The Cambridge Institution.* Nagore.
3-7-12	N	**Andrews,** EGBERT ARTHUR, B.A. Tocklai Experimental Station, Cinnamara, Jorhat, Assam.
5-11-24	R	**Asaduzzaman,** KHAN BAHADUR. *Assistant Secretary to the Government of Bengal.* 42, Beniapukur Road, Calcutta.
1-2-26	N	**Asana,** JEHANGIR JAMASJI, M.A. (BOMBAY), B.A. (CANTAB.), *Lecturer in Zoology.* Gujerat College, Ahmedabad.
3-5-11	R	**Atkinson,** ALBERT CHARLES. La Martiniere, 11, Loudon Street, Calcutta.
6-7-04	N	**Aulad Hasan,** SAYID, KHAN BAHADUR. Rajar Deori, Dacca.

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5-3-24	R	**Austin,** J. Mein, *Merchant.* Messrs. Jardine, Skinner & Co., Calcutta.
4-4-17	N	**Awati,** P. R., M.A., *Medical Entomologist.* Central Research Institute, Kasauli.
3-3-14	L	**Bacot,** J. 31, Quai d'Orsay, Paris.
1-11-26	R	**Bagchi,** Probodh Chandra, Dr.-es-lettres (Paris), *Member of the A. S. of Paris; Lecturer, Calcutta University.* P-399, Russa Road, Calcutta.
1-3-26	R	**Bagnall,** John Frederick, *Consulting Engineer.* Messrs. Macneill & Co., 2, Fairlie Place, Calcutta.
2-4-24	N	**Bahl,** K. N., *Professor of Zoology, Lucknow University.* Badshabagh, Lucknow.
5-11-24	N	**Baidil,** A. Mannan, *Assistant Superintendent, Dormitory.* Patna College, Bankipur.
2-4-19	R	**Bal,** Surendra Nath, M.Sc., F.L.S., *Curator, Industrial Section, Indian Museum.* 1, Sudder Street, Calcutta.
3-3-20	R	**Ballardie,** J. H. de Caynoth, A.R.I.B.A. 7, Old Court House Street, Calcutta.
1-4-25	R	**Banerjee,** Abhaya Charan, M.A., *Deputy Chief Engineer, Telegraphs.* 27A, Ballygunge Circular Road, Calcutta.
4-3-25	R	**Banerjee,** Abinash Chandra, Rai Bahadur, M.A., M.L.C., *Coal Merchant and Colliery Proprietor.* 8B, Lall Bazar, Calcutta.
7-1-25	R	**Banerjee,** M. N., C.I.E., B.A., M.R.C.S., L.S.A., *Ex-Principal, Carmichael Medical College; Member of the Syndicate, Calcutta University.* 32, Theatre Road, Calcutta.
6-2-18	N	**Banerjee,** Narendra Nath, M.I.P.O.E.E., A.M.I.E., *Divisional Engineer, Telegraphs.* Mandalay, Burma.
5-4-22	N	**Banerjee,** Sasadhar, B.A., B.Ed., *Head Master, Gait H. E. School.* Aurangabad, Gaya.
1-3-26	R	**Banerjee,** Woomesh Chandra, *Colliery Proprietor and Merchant.* 7, Swallow Lane, Calcutta.
5-7-26	R	**Banerji,** S. K., ph. d., *Lecturer in Indian History, University of Lucknow.* Lucknow.
1-3-05	R	**Banerji,** Muralidhar. Sanskrit College, Calcutta.
2-7-19	R	**Banerji,** Pramathanath, M.A., B.L., *Vakil, High Court.* 9, Mullick Lane, Bhowanipur, Calcutta.
2-7-07	R	**Banerji,** Rakhal Das, M.A. 65, Simla Street, Calcutta.
5-3-24	R	**Bannerjee,** P. N., M.A. (Cantab.), A.M.I.E., F.C.U., *Civil Engineer.* 6 and 7, Clive Street, Calcutta.
1-2-26	R	**Baptist,** A. E., M.B.E., Major, I.M.D., *Assistant Director.* School of Tropical Medicine, Central Avenue, Calcutta.
6-5-25	R	**Baral,** Gokul Chandra, *Zemindar, Municipal Councillor and Honorary Presidency Magistrate.* 3, Hidaram Banerjee's Lane, Calcutta.
7-2-23	R	**Barber,** Cecil Thomas, *Assistant Superintendent, Geological Survey of India.* Indian Museum, Calcutta.
1-11-26	N	**Barhut,** Thakur Kishoresinghji, *State Historian of Patiala Govt.* History and Research Department, Patiala.
4-5-21	R	**Barnardo,** F. A. F., C.B.E., C.I.E., M.D., F.R.C.S., F.R.C.E., Lt.-Col., I.M.S., *Principal, Medical College.* Calcutta.
2-3-98	N	**Barnes,** Herbert Charles, C.I.E., M.A. (Oxon.) Gauhati, Assam.
7-12-21	R	**Barua,** B. M., M.A., D.Litt., *Lecturer, Calcutta University.* Chandernagore, E. I. Ry.
3-12-23	R	**Barwell,** N. F., Lt.-Col. (retd.), M.C., M.A., Bar.-at-Law.

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		Bishop's House, 51, Chowringhee, Calcutta (*and*) Aylmerton House, Aylmerton, Norfolk, England.
3-7-18	R	**Basu,** CHARU CHANDRA, B.A., M.B., *Professor of Pathology, Carmichael Medical College.* 52/2, Mirzapur Street, Calcutta.
5-3-24	R	**Basu,** D. N., Bar.-at-Law. 14, Baloram Ghose Street, Calcutta.
3-12-24	R	**Basu,** JATINDRA NATH, M.A., M.L.C., *Solicitor.* 14, Baloram Ghose Street, Calcutta.
1-3-26	R	**Basu,** NARENDRA KUMAR, *Advocate, High Court.* 12, Pataldanga Street, Calcutta.
4-6-26	N	**Bathgate,** JEAN BERTRAM (MRS.). Jealgora, Dist Manbhoom.
4-1-26	N	**Bathgate,** RICHARD GED. MUIR, M.I.M.E., F.G.S., *General Manager, East Indian Coal Company Ltd.* Jealgora, Manbhoom.
1-2-26	N	**Batia,** B. L., M.SC., F.Z.S., F.R.M.S., *Lecturer in Zoology, Government College.* Lahore.
6-5-25	F	**Batra,** HARGOBIND LAL, M.C., MAJOR, I.M.S. c/o Messrs. Grindlay & Co., 54, Parliament Street, London, S.W. 1.
7-7-09	N	**Bazaz,** RANGNATH KHEMRAJ, *Proprietor, Shri Venkateshwar Press.* 7th Khetwadi, Bombay No. 4.
3-7-95	L	**Beatson-Bell,** REV. SIR NICHOLAS DODD, K.C.S.I., K.C.I.E. Edgeclisse, St. Andrews, Scotland.
4-1-26	R	**Becker,** JOHN NEILL, *Mercantile Assistant.* Messrs. Becker Gray & Co. (Cal.) Ld , Calcutta.
7-4-15	N	**Belvalkar,** SRIPAD KRISHNA, M.A., PH.D., *Professor of Sanskrit.* Deccan College, Poona.
4-3-25	R	**Benthall,** E. C., *Merchant.* 37, Ballygunge Park, Calcutta.
7-4-09	R	**Bentley,** CHARLES A., M.B., D.P.H., D. T. M. & H. Department of Public Health, Writers' Buildings, Calcutta.
6-5-25	R	**Bery,** ATMA RAM, *Merchant.* 43, Ripon Street, Calcutta.
3-5-26	N	**Bhagwant Rai,** SARDAR, MUNSHI RAI, M.P.H.S., *Retired District Judge.* Bhagwant Ashram, Patiala.
1-8-17	R	***Bhandarkar,** DEVADATTA RAMKRISHNA, M.A., PH.D. 35, Ballygunge Circular Road, Calcutta.
6-6-23	N	**Bhanot,** KALI DAS, *Superintendent, Forests.* Jubbal State, Chopal, via Simla.
3-5-26	N	**Bhaskaraiya,** C., M.A., *Assistant Accountant General, Central Revenue.* New Delhi.
5-4-26	N	**Bhatia,** M L., M.SC., *Lecturer in Zoology, Lucknow University.* Lucknow.
4-3-25	N	**Bhatnagar,** JAGMOHAN LAL, M.A., *Professor of History, Randhir College.* Kapurthala.
7-7-09	R	**Bhattacharji,** SHIB NATH, M.B. 80, Shambazar Street, [Calcutta.
4-11-08	R	**Bhattacharya,** BISVESVAR, B.A., M.R.A.S., B.C.S. 16, Townshend Road, Bhowanipore, Calcutta.
1-2-22	N	**Bhattacharya,** VIDHUSHEKHARA PANDIT, *Principal, Vidyabhavana.* Visvabharati, Santiniketan, Birbhum.
7-7-24	L	**Bhattacharyya** BINAYATOSH, M.A., PH.D., *General Editor, Gaekwad's Oriental Series, and Librarian, Oriental Collections, Baroda State.* Baroda.
9-6-22	R	**Bhattacharyya,** SIVAPADA, M.D. School of Tropical Medicine and Hygiene, Central Avenue, Calcutta.
4-2-25	N	**Bhor,** SHYAM CHAND, *Accountant.* Bhopal Chowk, Bhopal.
4-2-25	R	**Bishop,** THOMAS HENRY, M.R.C.S., L.R.C.P., D.P.H., *Chief Medical Officer, E. B. Ry.* 2, Belvedere Park, Alipore, Calcutta.

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1-8-23	R	**Biswas,** KALIPADA, M.A. Royal Botanic Gardens, Sibpur, Howrah.
6-12-22	N	**Blackett,** SIR BASIL PHILLOT, K.C.B., *Finance Member, Government of India.* Delhi *and* Simla.
1-2-93	L	***Bodding,** REV. P. O., M.A. (CHRIST.), F.A.S.B. Mohulpahari, Santhal Parganas.
3-7-12	R	**Bomford,** TREVOR LAWRENCE, M.B., B.S., M.R.C.S., L.R.C.P., CAPT., I.M.S. Civil Surgeon, Burdwan.
2-2-98	R	**Bose,** AMRITA LAL, *Dramatist.* 9-2, Ram Chandra Maitra Lane, Calcutta.
4-2-25	R	**Bose,** DEBENDRA NATH, *Deputy Magistrate and Deputy Collector, Alipore, 24-Parganas.* 4C, Paddopukur Road, Bhawanipur, Calcutta.
5-4-26	R	**Bose,** GIRINDRA SHEKHAR, D.SC., M.B., *Medical Practitioner and University Lecturer.* 14, Parsi Bagan, Calcutta.
6-5-25	R	**Bose,** H. M., B.A., Bar.-at-Law. 177, Lower Circular Road, Calcutta.
6-3-95	R	***Bose,** SIR JAGADIS CHANDRA, KT., C.S.I., C.I.E., F.R.S., M.A., D.SC., F.A.S.B. Bose Institute, 91, Upper Circular Road, Calcutta.
5-4-22	N	**Bose,** JOGESH CHANDRA, VIDYABINODE, *Landholder.* Contai, Midnapore.
6 7 25	R	**Bose,** MANMATHA MOHAN, M.A., *Professor, Scottish Churches College.* 19, Gokul Mitra Lane, Hatkhola, Calcutta.
5-3-24	R	**Bose,** S., B.A., *Deputy Assistant Controller of Military Accounts, Presidency and Assam District.* 8, Ramkissen Das Lane, Amherst Street, Calcutta.
1-2-26	R	**Bose,** SAHAY RAM, D.SC., F.R.S.E., F.L.S., *Professor of Botany, Carmichael Medical College.* Calcutta.
3-10-17	N	**Bose,** SATYENDRA NATH, M.SC., *Professor, Dacca University.* Ramna, Dacca.
6-7-10	N	**Botham,** ARTHUR WILLIAM, C.S.I., C.I.E., I.C.S. Shillong.
2-11-25	R	**Bradshaw,** ERIC JEAN, B.A., B.A.I., F.G.S., *Assistant Superintendent, Geological Survey of India.* 27, Chowringhee, Calcutta.
6-12-26	R	**Brahmachari,** BIPIN BIHARI, D.P.H., *Asst. Director of Public Health, Bengal.* 18, Mohun Lal Street, Calcutta.
4-1-26	R	**Brahmachari,** INDU BHUSAN, *University Lecturer.* 110-2, Dhakuria Road, Kalighat, Calcutta.
1-1-08	R	***Brahmachari,** UPENDRA NATH, RAI BAHADUR, M.A., PH.D., M.D., F.A.S.B. 82/3, Cornwallis Street, Calcutta.
4-2-20	N	**Brij Narayan,** M.A., F.R.HIST.S., M.R.A.S., *Deputy Collector of Military Accounts, Western Command and Baluchistan Dist.* Quetta.
3-7-07	A	***Brown,** JOHN COGGIN, O.B.E., D.SC., F.G.S., M.I.M.E., M.INST.M.M., M.I.E., F.A.S.B. Geological Survey of India, 27, Chowringhee. Calcutta.
6-10-09	R	**Brown,** PERCY, A.R.C.A. Government School of Art, Calcutta.
5-3-24	R	**Browne,** H., CAPT., M.B.E., L.R.I.B.A., *Architect.* Messrs. Martin & Co., 6 & 7, Clive Street, Calcutta.
2-7-24	F	**Browne,** REV. L. E., M.A. 21, The Drive, Northampton, England.
6-10-09	R	***Brühl,** PAUL JOHANNES, I.S.O., D.SC., F.C.S., F.G.S., F.A.S.B. 35, Ballygunge Circular Road, Calcutta.
8-1-96	N	***Burn,** SIR RICHARD, KT., C.I.E., I.C.S., F.A.S.B. Board of Revenue, Allahabad, U.P.
4-3-25	R	**Buyers,** WILLIAM ALEXANDER, M.I.C.E., *Deputy Chief*

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Date of Election.		
		Engineer, E. I. Ry. East Indian Railway House, Calcutta.
2-4-13	R	**Calder,** CHARLES CUMMING, B SC., F.L.S. Royal Botanic Gardens, Sibpur, Howrah.
2-8-26	R	**Calder,** NORMAN DOUGLAS, *Deputy Traffic Manager, E. B. Ry.* 3, Belvedere Park, Alipore, Calcutta.
7-12-25	R	**Carritt,** STANLEY ERNEST. c/o Messrs. Thacker Spink & Co., 3, Esplanade, Calcutta.
1-9-20	R	**Chakladar,** HARAN CHANDRA, M.A. 28/4, Srimohan Lane, Kalighat, Calcutta.
3-3-09	R	**Chakravarti,** NILMANI, M.A. Presidency College, Calcutta.
1-2-26	R	**Chand,** LAL, *Printer.* 76, Lower Circular Road, Calcutta.
6-12-01	N	**Chand,** DEWAN TEK, O.B.E., I.C.S., M.A., M.R.A.S., Barrister-at-Law., *Commissioner.* Ambala, Punjab.
1-9-20	R	***Chanda,** RAMAPRASAD, RAI BAHADUR, B.A., F.A.S.B. 37A, Police Hospital Road, Calcutta.
3-1-06	R	**Chapman,** JOHN ALEXANDER. c/o The Imperial Library, Calcutta.
27-10-15	F	**Chatterjee,** SIR ATUL CHANDRA, KT., I.C.S., *High Commissioner for India.* India Office, London.
5-1-16	R	**Chatterjee,** KHAGENDRA NATH, B.A., B.L., *Attorney-at-Law.* 12, Madan Mohan Chatterjee Lane, Calcutta.
1-10-20	R	**Chatterjee,** NIRMAL CHANDRA. 52, Haris Mukerjee Road, Bhowanipore, Calcutta.
3-12-24	R	**Chatterjee,** SAILENDRA NATH, *Deputy Assistant Controller of Military Accounts (P. & A District).* 9/4, Badur Bagan Row, Calcutta.
4-1-26	R	**Chatterji,** KSHITISH CHANDRA, M.A., *Lecturer in Comparative Philology, Calcutta University.* 99, Shambazar Street, Calcutta.
7-6-11	R	**Chatterji,** KARUNA KUMAR, I.T.F., M.C., V.H.S. 6/1, Wood Street, Calcutta.
5-3-24	R	**Chatterji,** MOHINI MOHAN, M.A., B.L., *President, Incorporated Law Society of Calcutta.* 33, McLeod Street, Calcutta.
6-8-24	R	**Chatterji,** SUNITI KUMAR, M.A., D. LIT., *Khaira Professor, Calcutta University.* 3, Sukias Row, Calcutta.
2-11-25	N	**Chattopadhyaya,** KSHETRESA CHANDRA, M.A., *Lecturer in Sanskrit.* Allahabad University, Allahabad.
5-11-24	R	**Chattopadhyaya,** K. P., *Lecturer in Anthropology, Calcutta University.* 2, Ramkissen Das Lane, Badur Bagan, Calcutta.
28-9 93	R	***Chaudhuri,** B. L., B.A., D.SC. (EDIN.), F.R.S.E., F.L.S. (LOND.), F.A.S.B. 9A, South Road, Entally, Calcutta *and* Sherpur Town, Mymensingh.
1-4-14	R	**Chaudhuri,** GOPAL DAS. 32, Beadon Row, Calcutta.
1-2-26	N	**Chaudhuri,** HARAPRASAD, *Reader in Botany, Punjab University.* Lahore.
7-1-25	N	**Chaudhuri,** HEMANTA CHANDRA, *Zemindar.* Sherpur Town, Mymensingh.
4-3-25	R	**Chaudhuri,** J., B.A. (OXON.), M.A. (CAL.), *Barrister-at-Law.* 34, Ballygunge Circular Road, Calcutta.
4-2-14	R	**Chaudhuri,** SAIYED NAWAB ALI, THE HON'BLE NAWAB BAHADUR, KHAN BAHADUR, C.I.E. 4, Old Ballygunge, Calcutta.
7-1-25	N	**Chaudhuri,** SATYENDRA MOHAN, B.A., B.SC., *Zemindar.* Sherpur Town, Mymensingh.
3-8-25	N	**Chhibber,** H. L., M.SC., F.G.S., F.R.G.S., *Asst. Superin-*

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		tendent, Geological Survey of India, Burma Party. 230, Dalhousie Street, Rangoon.
5-4-26	R	**Chokhany,** RAM DEV, RAI SAHEB, *Stock and Share Broker, Member, Calcutta Improvement Trust.* 135, Harrison Road, Calcutta.
6-12-26	R	**Chokhani,** SREENARAYAN, *Secretary, Shree Hanuman Pustkalaya.* 8, New Ghuseri Road, Salkea, Howrah.
5-12-23	R	**Chopra,** B. N., *Asst. Superintendent, Zoological Survey of India.* Indian Museum, Calcutta.
1-2-22	R	**Chopra,** R. N., LT. COL, I.M.S., *Professor of Pharmacology.* School of Tropical Medicine and Hygiene. Central Avenue, Calcutta.
3-7-07	R	***Christie,** WILLIAM ALEXANDER KYNOCH, B.SC., PH.D., M.INST.M.M., F.A.S.B. Geological Survey of India, Indian Museum, Calcutta.
3-11-09	N	***Christophers,** SAMUEL RICHARD, C.I.E., O.B.E., F.A.S.B., M.B., LT.-COL., I.M.S. Central Research Institute, Kasauli.
1-9-15	R	**Cleghorn,** MAUDE LINA WEST (MISS), F.L.S., F.E.S. 12, Alipur Road, Calcutta.
2-5-23	A	**Collenberg,** BARON H RUDT VON, *Consul-General for Germany.* 2, Store Road, Calcutta.
1-11-26	R	**Collet,** ARTHUR LOWE, *Solicitor.* Messrs. Leslie & Hinds, 6, Hastings Street, Calcutta.
1-12-20	R	**Connor,** SIR FRANK POWELL, KT., LT.-COL., I.M.S., D.S.O., F.R.C.S., *Professor of Surgery, Medical College.* 2 Upper Wood Street, Calcutta.
3-6-24	R	**Cooper,** H., *Manufacturing Chemist.* 18, Convent Road, Calcutta.
3-8-25	R	**Coyajee,** SIR J. C., KT., B.A. (CANTAB.), LL.B., I.E.S., *Professor, Presidency College.* 2/3, Camac Street, Calcutta.
25-8-87	R	**Criper,** WILLIAM RISDON, F.C.S., F.I.C., A.R.S.M. Konnagar.
2-11-25	R	**Crookshank,** HENRY, *Assistant Superintendent, Geological Survey of India.* Indian Museum, Calcutta.
4-1-26	N	**Cunningham,** J., M.D., LT.-COL., I.M.S., *Director, Pasteur Institute of India.* Kasauli, Punjab.
4-3-25	R	**Das,** AJIT NATH, M.R.A.S., F.Z.S., *Zemindar.* 24, South Road, Entally, Calcutta.
2-4-24	R	**Das,** BIRAJ MOHAN, M.A.(CAL.), M.SC.(LOND.), *Superintendent, Calcutta Research Tannery.* 2/1, Kirti Mitter Lane, Calcutta.
3-4-18	N	**Das,** JAGANNATH, B.A., RATNAKAR, KAVISUDHAKAR. The Rajsadan, Ajodhya.
3-12-24	R	**Das,** SURENDRA NATH, M.B., *Medical Practitioner.* 67, Nimtala Ghat Street, Calcutta.
5-3-24	N	**Das,** S. R., BAR.-AT-LAW, *Law Member, Viceroy's Council.* [Simla.
1-9-15	R	**Das-Gupta,** HEM CHANDRA, M.A., F.G.S., *Professor, Presidency College.* Calcutta.
6-9-22	R	**Das-Gupta,** SURENDRA NATH, *Professor of Sanskrit and Philosophy, Presidency College.* 104, Bakul Bagan Road, Calcutta.
1-3-26	R	**Datta,** HIRENDRA NATH, M.A., B.L., *Solicitor, High Court.* 139, Cornwallis Street, Calcutta.
4-4-17	R	**Datta,** RASIK LAL, D.SC., F.C.S., F.R.S.E., *Industrial Chemist to the Government of Bengal.* 78, Manicktola St., Calcutta.
3-6-25	R	**Datta,** S. K., B.A., M.B., CH.B. (EDIN.), *Secretary, National Council, Y.M.C.A.* 5, Russell Street, Calcutta.

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6-8-24	L	**Davies**, L. M., MAJOR, *Royal Artillery.* c/o The Lloyds Bank, King's Branch, 6, Pall Mall, London.
2-8-26	R	**De**, BRAJENDRANATH, M.A., I.C.S. (RETIRED). 11, Lower Rawdon Street, Calcutta.
2-4-24	R	**De**, F. L., RAI BAHADUR. 99, Grey Street, Calcutta.
19-9-95	L	**De**, KIRAN CHANDRA, C.I.E., B.A., I.C.S., *Member, Board of Revenue, Government of Bengal.* 21, Camac Street, Calcutta
7-6-26	R	**De**, PHANINDRANATH, M A , B.L., *Vakil, High Court.* 4, Patuatola Lane, Calcutta.
6-6-17	R	**Deb**, KUMAR HARIT KRISHNA, M.A., *Zemindar.* 8, Raja Nabokishen Street, Calcutta.
7-9-21	R	**Deb**, KUMAR PROFULLA KRISHNA, *Zemindar.* 106/1, Grey Street, Calcutta.
4-3-25	R	**Deb**, KSHITINDRA, RAI MAHASAI OF BANSBERIA RAJ, RAJA. 21/E, Rani Sankari Lane, Kalighat, Calcutta.
7-12-25	R	**Derviche-Jones**, ARTHUR DANIEL, LT.-COL., D.S.O., M.C., *Solicitor.* c/o Messrs. Orr Dignam & Co., Standard Buildings, Dalhousie Square, Calcutta.
4-5-10	L	**Dhavle**, SANKARA BALAJI, I.C.S., *District and Sessions Judge.* Monghyr.
4-8-20	R	**Dikshit**, KASHINATH NARAYAN, M.A., *Superintendent, Archæological Survey of India.* Indian Museum, Calcutta
5-1-98	R	**Dods**, WILLIAM KANE, *Agent, Hongkong and Shanghai Banking Corporation.* 4, Alipur Road, Calcutta.
2-7-02	R	**Doxey**, FREDERICK. 63, Park Street, Calcutta.
6-12-26	R	**Dutt**, JOGEN CHUNDER, M.A., B.L., *Attorney-at-Law.* 17, Maniktola Street, Calcutta.
4-2-25	R	**Dutt**, KIRAN CHANDRA, *Zemindar.* Laksmi Nibas, 1, Laksmi Dutt Lane, Baghbazar, Calcutta.
7-4-20	R	**Dutt**, KUMAR KRISHNA. 10, Hastings Street, Calcutta.
5-11-24	A	**Eaton**, WINIFRED A. (MISS), *Principal, Bible Training School for Women.* Palkonda, Vizagapatam.
1-2-26	R	**Edwards**, C. A. HENRY, *Deputy Chief Engineer, E. B. Ry.* 8, Belvedere Park, Alipore, Calcutta.
1-11-11	R	**Esch**, V. J., *Architect.* Victoria Memorial, Cathedral Avenue, Maidan, Calcutta.
3-8-04	R	***Fermor**, LEWIS LEIGH, A.R.S.M., D.SC., F.G.S., F.A.S.B. Geological Survey of India, Indian Museum, Calcutta.
31-10-06	N	**Finlow**, ROBERT STEEL, B.SC., F.I.C., *Director of Agriculture, Bengal.* Ramna, Dacca.
5-3-24	R	**Fitzpatrick**, H., *Engineer.* 17, Stephen Court, Calcutta.
4-1 26	R	**Fleming**, ANDREW, *General Manager for the East, Minimax, Ltd.* 59, Park Street, Calcutta.
4-3-25	A	**Foskett**, RALPH CAVAN, c/o The "Englishman," 9, Hare Street, Calcutta.
5-11-13	R	**Fox**, CYRIL S., B.SC., M.I.M.E., F.G.S. Geological Survey of India, Indian Museum, Calcutta.
2-4-19	N	**Friel**, RALPH, I.C.S. Silchar, Assam.
5-4-22	A	**Fülep**, E. G., *Proprietor, E. G. Fülep & Co.* 5, Mission Row, Calcutta.
7-6-26	R	**Fyfe**, DAVID ALLAN, *Assistant, Messrs. Shaw Wallace & Co.* 4, Bankshall Street, Calcutta.
4-1-26	R	**Gaffar**, ABDUL, KHAN SAHEB, *Police Magistrate, Alipore.* 23, Gardner Lane, Calcutta.

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Date of Election.		
1-11-26	R	**Galstaun,** Shanazan, M.A., D.M.R.E., M.R.C.S., L.R.C.P., *Medical Practitioner, Radiologist, Medical College Hospital.* Galstaun Park, Lower Circular Road, and 39, Theatre Road, Calcutta.
5-11-19	N	**Gambhir,** J. S. Shamaldas College, Bhavnagar, Kathiawar.
7-10-09	R	**Gangoly,** Ordhendra Coomar, B.A. 12/1, Gangoly Lane, Calcutta.
3-3-20	N	**Ganguli,** Pratul Pati, B.A., D.T.M., Capt., I.M.S. (late), *Teacher of Medicine, Dacca Medical School.* 17, Nayabazar Road, Dacca.
4-2-25	R	**Ganguly,** J. N. C., M.A. (Birmingham), Darshan-Shastri. National Council, Y.M.C.A., 5, Russell Street, Calcutta.
2-11-25	R	**Gee,** Edward Rowland, B.A. (Cantab.), *Asst. Superintendent, Geological Survey of India.* Indian Museum, Calcutta.
5-4-26	R	**Ghose,** Bimal Chandra, Barrister-at-law. 27/1, Haris Mukherjee Road, Calcutta.
2-4-24	R	**Ghose,** Sir Charu Chandra, kt., Barrister-at-Law, *Judge, High Court.* 10, Debendra Ghose Road, Bhowanipore, Calcutta.
2-7-24	R	**Ghose,** Bepin Behari, *Judge, High Court.* 101, Beltala Road, Calcutta.
3-12-24	R	**Ghose,** Sushil Chandra, *Deputy Magistrate.* 1, Sikdarbagan Street, Calcutta.
5-7-05	R	**Ghosh,** Amulya Charan, Vidyabhusan. 28, Telepara Lane, Calcutta.
2-4-24	R	**Ghosh,** K., D.T.M., D.P.H. (Cantab.), L.M.S., *Medical Practitioner.* 45, Creek Row, Calcutta.
6-2-18	L	**Ghosh,** Ekendra Nath, M.D., M.Sc., F.Z.S., F.R.M.S., *Professor of Biology, Medical College.* 66, Cornwallis Street, Calcutta.
4-3-25	R	**Ghosh,** Gyanendra Chandra, Rai Bahadur, C.I.E., *Zemindar.* 2, Simla Street, Calcutta.
5-5-20	R	**Ghosh,** Sukhendra Nath, B.A. (Cal.), B.Sc. (Glas.), A.M.I.C.E., F.R. San. I., M.I.E., *Executive Engineer, P.W.D., Bengal.* 7, Heysham Road, Calcutta.
4-9-12	R	**Ghosh,** Tarapada. 14, Paddapukur Street, Kidderpur, Calcutta.
1-2-26	R	**Ghuznavi,** A. H., *Merchant and Zemindar.* 18, Canal Street, Entally, Calcutta.
1-2-26	R	**Ghuznavi,** Sir A. K., kt., M.L.C., *Zemindar of Dilduar, late Minister, Government of Bengal.* North House, Dilduar, Mymensingh *and* Calcutta Club, Calcutta.
3-12-24	R	**Gilbert,** W. G. L., *Traffic Manager, Messrs. Martin & Co.'s Light Railways.* 6/7, Clive Street, Calcutta.
1-2-26	R	**Goswami,** Mahendra Nath, M.A., D.Sc. *Assistant Professor of Applied Chemistry, University College of Science.* 92, Upper Circular Road, Calcutta.
7-9-10	N	***Gravely,** Frederic Henry, D.Sc., F.A.S.B. Government Museum, Egmore, Madras.
3-5-05	F	**Graves,** Henry George, A.R.S.M. 52, Cardington Road, Bedford, England.
5-3-24	A	**Greaves,** Sir Ewart, kt., *Judge, High Court.* 2, Short Street, Calcutta.
2-3-10	A	***Greig,** Edward David Wilson, M.B., Major, I.M.S., F.A.S.B. Simla.
5-12-00	L	**Grieve,** James Wyndham Alleyne. c/o Messrs. Coutts & Co., 440, Strand, London, W.C. 2.

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4-2-25	R	**Guha,** B. S., M.A., PH.D. (Harvard). 121/B, Justice Chunder Madhav Road, Elgin Road, Calcutta.
6-12-26	R	**Guha,** SURENDRANATH, *Vakil, High Court, Government Pleader.* 18, Ram Mohan Dutt Road, Bhawanipur, Calcutta.
1-2-26	N	**Gulati,** AMAR NATH, M.SC. c/o. Imperial Institute of Veterinary Research, Muktesar, U.P.
1-3-26	N	**Gupta,** DHIRENDRA NATH, MAJOR, L.M.S. (BOMB.), *Behar and Orissa Medical Service.* Assistant Surgeon, Sadar Hospital, Arrah.
6-6-17	A	**Gupta,** KISHORIMOHAN, M.A., *Professor of History, M.C. College.* Sylhet, Assam.
7-3-23	R	**Gupta,** N., BARRISTER-AT-LAW. Calcutta Club, 241, Lower Circular Road, Calcutta.
5-3-19	N	**Gupta,** SIVAPRASAD. Seva Upavana, Benares City.
5-4-26	R	**Gupta,** SURENDRA NATH, *Insurance Broker.* 101/1, Clive Street, Calcutta.
3-6-25	R	**Gupta,** TARA PRASANNA, M.A. 28/2/1, Akhil Mistry Lane, Calcutta.
5-8-15	N	**Gurner,** CYRIL WALTER, I.C.S. District Magistrate, Mymensingh.
4-1-26	R	**Habib,** MOHAMMAD, B.A. (OXON.), M.R.A.S., BARRISTER-AT-LAW, *Professor of History, Muslim University.* Aligarh.
6-5-25	N	**Habibullah,** SIR MD., KT., KHAN BAHADUR, *Member for Education, Health and Lands.* Simla *and* Delhi.
6-3-01	N	**Habibur** RAHMAN KHAN, *Rais.* Bhikanpur, District Aligarh.
6-6-92	F	**Haig,** SIR T. WOLSELEY, KT., C.M.G., LT.-COL. 34, Gledstanes Road, West Kensington, London, W. 14.
7-8-07	F	***Haines,** HENRY HASELFOOT, C.I.E., F.C.H., F.L.S., F.A.S.B. Glen Ashton, Wimborne, Dorset, England.
2-11-25	N	**Hamid,** MUHAMMAD, B.A., *Asst. Superintendent, Archæological Survey, Central Circle.* Patna.
6-1-16	N	**Hamilton,** C. J. Patna University, Patna.
2-11-21	N	**Haq,** SHAH EMDADUL, M.L.C. Bhowksar, Mudafargar, Dist. Tippera.
5-5-20	A	**Harcourt,** E. S., MAJOR. United Service Club, Calcutta.
1-5-12	R	**Harley,** ALEXANDER HAMILTON, M.A., *Principal, Islamia College.* Calcutta.
2-5-23	R	**Harnett,** W. L., LT.-COL., I.M.S., M.B., F.R.C.S., *Principal, Medical College.* Calcutta.
1-2-26	R	**Harris,** H. G., *Director, Messrs. Martin & Harris, Ltd.* 8, Waterloo Street, Calcutta.
1-4-08	A	**Harrison,** EDWARD PHILIP, PH.D., F.R.S.E. The Observatory, Alipur, Calcutta.
5-11-19	N	**Hemraj,** RAJ GURU. Dhokatol, Nepal.
3-12-24	R	**Hendry,** C. A. JOHN, F.R.G.S., M.I.S.E., A.M.I.M.E., M.I.E., M.MIN.I., *Consulting Mechanical Engineer, Messrs. Martin & Co.* 6 & 7, Clive Street, Calcutta.
7-6-11	R	***Hidāyat Hosain,** MUHAMMAD, SHAMS-UL-'ULAMĀ, KHAN BAHADUR, PH.D., F.A.S.B. 96/2c, Collin Street, Calcutta.
4-2-20	N	**Hill,** HAROLD BRIAN CUNNINGHAM. Bhabua, Assam.
1-2-26	R	**Hingston,** H., MAJOR, I.M.S., M.D., *Surgeon to H. E. the Governor of Bengal.* Government House, Calcutta.
2-4-24	N	**Hingston,** R. W. G., MAJOR, I.M.S. c/o Lloyds Bank, Bombay.
1-4-25	R	**Hobbs,** HENRY, *Merchant.* 4, Esplanade East, Calcutta.

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Date of Election.		
7-6-26	N	**Hodge,** E. H. Vere, Major, I.M.S., M.B., B.C. (Cantab.), M.R.C.S., L.R.C.P., *Civil Surgeon.* Chittagong.
6-12-26	N	**Hora,** Gobindsahai, *Commission Agent and Pensioner.* Kasur Mandi, Lahore, Punjab.
2-11-21	R	**Hora,** Sunder Lal, D.Sc. Zoological Survey of India, Indian Museum, Calcutta.
4-3-25	R	**Hossain,** Muhammad Basheer, M.A, B.T., *Head Master, Government Woodburn M.E. School.* 24, Mussalmanpara Lane, Calcutta.
2-1-73	L	**Houstoun,** George L., F.G.S. Johnstone Castle, Renfrewshire, Scotland.
6-6-23	N	**Howard,** A, C.I.E., M.A., *Director, Institute of Plant Industry, and Agricultural Advisor to States in Central India* Indore, C. I.
4-1-26	R	**Hubert,** Otto, *Chancellor to the German Consulate General.* 2, Store Road, Ballygunge, Calcutta.
1-2-26	N	**Husain,** Mohammad Afzal, M.Sc., M.A., *Offg. Imperial Entomologist, Agricultural Research Institute.* Pusa, Behar.
5-7-26	N	**Husain,** Mohammad Moinuddin, *1st Talukdar.* Club View, Secunderabad, Deccan.
2-4-24	R	**Huq,** Mahfuzul, M.A., *Lecturer, Presidency College.* 13/1, Collin Lane, Calcutta.
6-6-23	N	**Hutton,** J. H., C.I.E., I.C.S., M.A., D.Sc., *Hon. Director of Ethnography.* Kohima, Naga Hills, Assam.
6-5-25	N	**Inamdar,** R. S., *Professor of Botany, Benares Hindu University.* Benares.
1-2-11	R	**Insch,** James. c/o Messrs. Duncan Bros. & Co., 101, Clive Street, Calcutta.
1-4-25	R	**Ismail,** Abdullah Mohomed, *Merchant.* 21, Amratolla Lane, Calcutta.
2-7-24	N	**Iyengar,** M. O. Parthasarathy, *Professor of Botany, Presidency College.* Madras.
5-12-23	R	**Jackson,** P. S., *Engineer, General Manager for India, The English Electric Co., Ltd.* D/4, Clive Buildings, Calcutta.
2-2-21	R	**Jain,** Chhote Lal, M.R.A.S. 25, Central Avenue North, Calcutta.
2-8-26	R	**James,** John Langford, *Barrister.* 2, Short Street, Calcutta.
2-11-25	N	**James,** Richard Congdon, *Tea Planter.* Dhoolie T. E., Rangajan, Assam.
1-11-26	R	**Jameson,** Thomas Blandford, Major, M.C., M.A. (Cantab.), I.C.S. 2, Baker Road, Alipur, Calcutta.
6-5-25	R	**Jatia,** Sir Onkar Mull, Kt., O.B.E., *Merchant.* 2, Rupchand Roy Street, Calcutta.
1-4-25	R	**Jennaway,** James Henry, *Merchant and Coal Manager.* 6 & 7, Clive Street, Calcutta.
7-2-23	N	**Jinavijayaji,** Muni, *Principal, Gujerat Puratattva Mandir.* Ellisbridge, Ahmedabad.
3-6-08	R	**Jones,** Hubert Cecil, A.R.S.M., A.R.C.S., F.G.S., *Superintendent, Geological Survey of India.* Indian Museum, Calcutta.
5-4-26	R	**Jones,** Thornton, *Solicitor.* c/o Messrs. Morgan & Co. 4, Hastings Street, Calcutta.
2-4-24	R	**Judah,** N. J., M.B., Ch.B., F.R.C.S. 2, Hungerford Street, Calcutta.

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Date of Election.		
5-2-19	N	**Kader,** SHEIKH ABDUL. Deccan College, Poona.
1-11-11	L	**Kamaluddin,** AHMAD, SHAMS-UL-'ULAMĀ, M.A., *Principal, Calcutta Madrasah.* Wellesley Square, Calcutta.
5-3-24	R	**Kanjilal,** M. N., BARRISTER-AT-LAW, M.A. (CAL.), LL.B. (CANTAB.). 17, Loudon Street, Calcutta.
5-11-24	R	**Kapur,** SHAMLAL, *Import and Banking.* 84, Khengrapatty, Calcutta.
7-7-20	R	**Kar,** SITES CHANDRA. 47, Corporation Street, Calcutta.
1-2-26	N	**Kashyap,** SHIV RAM, *Professor of Botany, Government College.* Lahore.
4-2-20	R	**Keir,** W. I., *Asst. Architect to the Govt. of Bengal.* Writers' Buildings, Calcutta.
5-5-10	F	**Kemp,** STANLEY W., B.A., D.SC., F.A.S.B. 8, Erskine Hill, Golders Green, London, N.W. 11.
3-2-15	N	**Khan,** HAFIZ AHMED ALI, *Controller of Household and Officer-in-charge, State-Library.* Rampur State, U.P.
1-2-26	R	**Khaitan,** D. P., M.L.C., *Attorney-at-Law; Solicitor and Merchant.* 137, Canning Street, Calcutta.
1-2-22	R	**Khambata,** R. B., M.R.C.S., L.R.C.P., D.P.H., *Director of Public Health Laboratory and Professor of Laboratory Practice, School of Tropical Medicine and Hygiene.* 2-B, Camac Street, Calcutta.
6-5-25	R	**Khanna,** VINAYEK LAL, M.R.A.S., *Merchant.* 12, Shib Thakur Lane, Calcutta.
2-8-26	R	**Khettry,** BENIMADHO, *Proprietor, Messrs. Gouri Shanker Khettry; Landholders, Bankers & Merchants.* 15, Paggiyapatti, Barabazar, Calcutta.
3-3-20	R	***Khuda Bukhsh,** S., M.A., BARRISTER-AT-LAW, F.A.S.B. 5, Elliott Road, Calcutta.
7-4-09	N	**Kilner,** JOHN NEWPORT, M.B., M.R.C.S., L.R.C.P. Adra, Chota Nagpur.
2-11-25	R	**Kimura,** R. (Ko-Shi), *Lecturer, Calcutta University.* 22, Wellesley 2nd Lane, Calcutta.
2-3-10	A	**Kirkpatrick,** W. Chartered Bank Buildings, Calcutta.
3-5-26	R	**Kirwan,** ERNEST WILLIAM O'GORMAN, MAJOR, I.M.S. Sealdah House, 135, Lower Circular Road, Calcutta.
7-7-20	R	**Knowles,** ROBERT, M.R.C.S., L.R.C.P., B.A. (CANTAB.), LT.-COL., I.M.S., 63, Park Street, Calcutta.
6-5-25	R	**Koester,** HANS, *Vice-Consul for Germany.* 17/1, Store Road, Ballygunge, Calcutta.
6-5-25	R	**Kolah,** K. S., *Merchant.* 8, Dhurrumtollah Street, Calcutta.
5-3-23	N	**Korke,** VISHNU TATYAJI, CAPTAIN, F.R.C.P. (EDIN.). Central Research Institute, Kasauli.
1-3-26	R	**Kramrisch,** STELLA, (Miss), PH.D., *Lecturer in Indian History of Arts, Calcutta University.* 35, Ballygunge Circular Road, Calcutta.
7-12-21	N	**Kumar,** KUMAR ANAND. Fairfield, Firozepore Road, Lahore.
2-11-25	N	**Kuppaswamy,** VALAVANUR SUBRAMANIA, M.A., F.L.S., I.F.S., *Assistant Conservator of Forests.* Bellary, S. India.
2-11-25	N	**Kureishy,** R. A., B.A., LL.B., MEMBER, "ROYAL ASIATIC SOCIETY" (LONDON), MEMBER, "LEAGUE OF NATIONS UNION" (LONDON), *Pleader.* "Noor Manzil," Gurgaon, Punjab.
7-3-23	R	**Labey,** GEORGE THOMAS, *Bengal Pilot Service.* United Service Club, Calcutta.

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1-4-25	N	**Laden La,** SONAM WANGFEL, SARDAR BAHADUR, F.R.G.S., *Hony. A.D.C. to H. E. the Governor of Bengal, Chief of Police, Lhassa, Tibet.* Darjeeling.
3-3-20	R	**Lahiri,** JAGADINDRANATH. 91, Upper Circular Road, Calcutta.
3-6-25	N	**Lal,** BUDH BEHARI, RAI SAHEB, B.A., PH.D., *Head Master, Government High School.* Naini Tal.
4-1-26	N	**Lamba,** GURDIAL SINGH, B.SC. (HONS.), *Provincial Forest Service (Dehra-Dun), Extra-Assistant Conservator of Forests.* Chanda, C. P.
6-3-89	L	***La Touche,** THOMAS HENRY DIGGES, M.A., F.G.S., F.A.S.B. 230, Hills Road, Cambridge, England.
5-8-14	R	**Law,** BIMALA CHARAN, M.A., B.L., PH.D., F.R.HIST.S. 24, Sukea Street, Calcutta.
1-2-11	R	**Law,** NARENDRA NATH, M.A., B.L., P.R.S., PH.D. 96, Amherst Street, Calcutta.
1-7-14	R	**Law,** SATYA CHURN, M.A., B.L., F.Z.S., M.B.O.U. 24, Sukea St., Calcutta.
1-2-26	R	**Lele,** S. H., M.A., B.SC., *Lecturer in Zoology, Royal Institute of Science.* Bombay.
7-6-26	R	**Lemmon,** RICHARD DENNIS, *Merchant.* 8, Waterloo Street, Calcutta.
7-12-25	R	**Lindsay,** JAMES HAMILTON, I.C.S., *Secretary to the Government of Bengal (Edn. Dept.).* Grand Hotel, Calcutta.
3-5-11	R	**Lomax,** C. E., M.A. La Martiniere. Calcutta.
7-4-70	L	**Lyman,** B. SMITH. 708, Locust Street, Philadelphia, U.S.A.
5-7-26	N	**Lyne,** HOWARD WILLIAM, I.C.S. Khulna, E.B.R.
2-8-05	R	***McCay,** DAVID, LT.-COL., I.M.S., M.D., B.CH., B.A.O., M.R.C.P., F.A.S.B. 24, Park Street, Calcutta.
5-11-24	R	**MacGregor,** A. D., M.B.C., V.S., I.V.S., *Principal, Bengal Veterinary College, Belgachia.* Calcutta.
1-3-26	R	**McKay,** JOHN WALLACE, *Delegate, Chilean Nitrate Committee (Indian Delegation).* 7, Hare Street, Calcutta.
11-1-93	L	**Maclagan,** SIR EDWARD DOUGLAS, K.C.S.I., K.C.I.E. 188, West Hill, Putney, London, S.W. 15.
5-3-24	R	**McPherson,** JAMES. c/o Messrs. Begg Dunlop & Co., Ltd., 2, Hare Street, Calcutta.
7-6-16	N	**Mahajan,** SURYA PRASAD. Murarpur, Gaya.
3-3-20	R	**Mahalanobis,** P. C., M.A., B.SC., *Professor, Presidency College.* 10, Cornwallis Street, Calcutta.
5-12-06	R	**Mahalanobis,** SUBODH CHANDRA, B.SC. (EDIN.), F.R.S.E., I.E.S., *Professor, Presidency College.* 210, Cornwallis Street, Calcutta.
1-3-11	R	**Mahatap,** SIR BIJOY CHAND, K.C.S.I., MAHARAJADHIRAJ OF BURDWAN. 6, Alipur Lane, Calcutta.
6-2-24	R	**Mahindra,** K. C., B.A. (CANTAB.). Accounts Department, Messrs. Martin & Co., 6 & 7, Clive Street, Calcutta.
7-8-18	R	**Maitra,** JATINDRA NATH, *Physician and Surgeon.* 68/A, Beadon St., Calcutta.
6-2-18	R	**Maitra,** SISIR KUMAR. 35/5, Paddapukur Road, Calcutta.
2-8-26	N	**Majumdar,** DHIRENDRA NATH, M.A., *Lecturer in Anthropology, University of Lucknow.* Lucknow.
2-6-20	N	**Majumdar,** NANI GOPAL, M.A. Archæological Department, Gorton Castle, Simla.
2-2-16	R	**Majumdar,** NARENDRA KUMAR, M.A., *Professor, Calcutta University.* 18, Jhamapukur, Mechuabazar, Calcutta.

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4-6-13	N	**Majumdar,** RAMESH CHANDRA, M.A., PH.D., *Professor, Dacca University.* Ramna, Dacca.
6-2-18	L	**Manen,** JOHAN VAN. 6, Temple Chambers, Calcutta.
5-6-01	N	**Mann,** HAROLD HART, D.SC., M.SC., F.I.C., F.L.S., *Director of Agriculture, Bombay.* Poona.
10-10-19	N	**Manry,** REV. J. C., M.A., PH.D. Ewing Christian College, Allahabad, U.P.
4-8-20	R	**Martin,** OSWALD. 6 & 7, Clive Street, Calcutta.
5-3-24	A	**Martin,** T. LESLIE, M.A. (CANTAB.). 6, Clive Street, Calcutta.
4-6-19	N	**Matthai,** GEORGE, M.A., *Professor.* Government College, Lahore.
1-2-22	R	**Megaw,** J. W. D., LT.-COL., I.M.S., *Director, School of Tropical Medicine and Hygiene.* 15, Kyd Street, Calcutta.
5-12-23	N	**Meggitt,** F. J., *Professor of Biology, University College.* Rangoon.
3-3-86	L	**Mehta,** ROOSTUMJEE DHUNJEEBHOY, C.I.E., J.P., F.R.S.A. 9, Rainey Park, Ballygunge, Calcutta.
4-2-25	N	**Menon,** K. RAMUNNI, *Professor of Zoology, Presidency College.* Madras.
1-2-26	F	**Meston,** LORD, K.C.S.I., LL.D. Hurst, Cookenham Dene, Berkshire, England.
5-11-84	N	***Middlemiss,** CHARLES STEWART, C.I.E., F.R.S., B.A., F.G.S., F.A.S.B. Srinagar, Kashmir.
3-9-84	R	**Miles,** WILLIAM HENRY, F.E.S. 7, King Edward Court, Chowringhee, Calcutta.
1-2-26	N	**Mills,** JAMES PHILIP, I.C.S. c/o Lloyds Bank (King's Branch), Calcutta.
2-11-25	R	**Mirza,** M. B., *Merchant.* 18/2, Dilkusha Street, Calcutta.
7-6-26	N	**Mishra,** DEOMITRA, *Public Prosecutor.* Kotah, Rajputana.
5-6-12	N	**Misra,** CHAMPARAM, B.A., *Dy. Director of Industries.* Cawnpore, U.P.
5-11-19	N	**Misra,** PRAMATHA NATH, M.R.A.S., *Pleader,* Malda.
2-4-24	R	**Mitra,** J. C., M.A., B.L., *Retired Accountant-General, Bengal.* 1, Abinash Mitter Lane, Calcutta.
6-6-06	R	**Mitra,** KUMAR MANMATHA NATH. 34, Shampukur Street, Calcutta.
2-4-19	R	**Mitra,** PANCHANAN. Bangabasi College, Calcutta.
2-4-24	R	**Mitsukuri,** R., LL.B., *Manager, Messrs. Asano Bussan Co., Ltd.* 2 & 3, Clive Row, Calcutta.
6-3-24	R	**Mitter,** SIR BINOD CHANDRA, KT., BARRISTER-AT-LAW. 2/1, Loudon Street, Calcutta.
5-3-24	R	**Mitter,** SIR B. L., KT, M.A., B.L., BARRISTER-AT-LAW, *Advocate General, Bengal.* 5, Outram Street, Calcutta.
1-4-25	R	**Mitter,** B. P. D., B.A., B.SC. 75, Chuckerbere Road, Elgin Road, Calcutta.
5-3-24	R	**Mitter,** DWARKANATH, M.A., D.L., *Judge, High Court.* 12, Theatre Road, Calcutta.
5-4-26	R	**Mitter,** KHAGENDRA NATH, M.A., *Professor, Presidency College.* 35, Beadon Row, Calcutta.
5-4-26	R	**Mitter,** KUMAR KRISHNA, *Merchant and Landlord.* 14, Ahiritolla Street, Calcutta.
5-3-24	R	**Mitter,** The Hon'ble SIR PROVASH CHANDRA, KT., C.I.E., M.L.C. 34/1, Elgin Road, Calcutta.
4-3-25	R	**Mitter,** PROFULLA CHANDRA, M.A. (CAL.), PH.D. (BERLIN), *Sir Rash Behary Ghosh Professor of Chemistry, Calcutta University.* 22, Garpar Road, Calcutta.
1-11-26	R	**Modi,** JAL R. K., B.A. 4, Camac Street, Calcutta.

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Date of Election.		
4-3-25	F	**Pochhammer,** Wilhelm von, *Secretary to German Embassy.* Tokio, Japan.
4-3-25	R	**Poddar,** Hanuman Prasad, *Banker and Commission Agent.* 10A, Central Avenue (South), Calcutta.
1-4-25	N	**Prasad,** Sri Durga Sadasivesvara, Raja Bahadur, Sri Vasireddi, Mannei Sultan, Garu, Zemindar of Jayantipuram. Camp Nandigama, Dist. Kistna.
3-4-18	R	**Prashad,** Baini, D.Sc., F.Z.S., F.R.S.E. Zoological Survey of India, Indian Museum, Calcutta.
3-8-25	R	**Pruthi,** Hem Singh, *Assistant Superintendent, Zoological Survey of India.* Indian Museum, Calcutta.
1-11-26	R	**Pugh,** Lewis Pugh Evans, B.A. (Oxon.), Barrister-at-Law. Temple Chambers, 6, Old Post Office Street, Calcutta.
3-12-24	R	**Pushong,** E. S., M.D., L.S.A., *Medical Practitioner.* 1, Wood Street, Calcutta.
2-4-24	R	**Raha,** S. K., Rai Bahadur, *Deputy Commissioner of Excise and Salt.* 5, Lovelock Place, Ballygunge, Calcutta.
7-4-80	N	**Rai,** Bepin Chandra. Giridih, Chota Nagpur.
1-2-22	R	***Raman,** Chandrasekhara Venkata, M.A., D.Sc., F.R.S., F.A.S.B. 210, Bowbazar Street, Calcutta.
4-1-05	N	**Rankin,** James Thomas, I.C.S., *Commissioner.* Dacca.
3-12-24	R	**Rao,** H. Srinivasa, *Assistant Superintendent, Zoological Survey of India.* Indian Museum, Calcutta.
6-5-25	R	**Rao,** M. Vinayak, Rao Bahadur, B.A., F.G.S., *Assistant Superintendent, Geological Survey of India.* Indian Museum, Calcutta.
1-2-26	N	**Rao,** T. Ramachandra, Rao Sahib, *Officiating Government Entomologist.* Lawley Road, Coimbatore.
1-11-26	N	**Rao,** Wuppala Lakshmana, M.A., B.Sc., Dr-rer-Nat. Digumarti House, Berhampore, Ganjam.
1-11-26	R	**Rau,** S. Sethu Rama, Rao Bahadur, B.A., F.G.S. Geological Survey of India, Indian Museum, Calcutta.
2-7-24	N	**Ray,** Abinash Chandra, B.A. Cooch Behar.
2-7-24	R	**Ray,** Bhabendra Chandra, *Zemindar.* 6, Short Street, Calcutta.
1-11-26	R	**Ray,** Gyanendranath, I.C.S., *Additional Judge, Alipur.* 5, Swinhoe Street, Ballygunge, Calcutta.
7-9-10	R	**Ray,** Kumar Sarat Kumar, M.A., M.R.A.S. 52, Police Hospital Road, Entally, Calcutta.
5-1-21	N	**Ray,** Jagadisnath, Maharaja, *Maharaja of Dinajpore.* Dinajpore.
2-4-24	R	**Ray,** Janaki Nath, Raja, *Zemindar and Banker.* 102, Sovabazar Street, Calcutta.
5-3-90	R	***Ray,** Sir Profulla Chandra, Kt., C.I.E., D.Sc., F.A.S.B. University College of Science, 92, Upper Circular Road, Calcutta.
5-3-24	R	**Ray-Chowdhury,** M. N., Raja, M.R.A.S., F.R.A.S., F.R.C.S., *Raja of Santosh.* 1, Alipur Park Road East, Calcutta.
3-3-20	R	**Raye,** Narendra Nath, *Principal, Ripon College.* Calcutta.
3-8-25	N	**Reuben,** David Ezra, I.C.S., *Collector.* Balasore, B. N. Ry.
2-4-24	F	**Richards,** F. J., I.C.S. 6, Lexham Gardens, London, W. 8.
3-6-25	R	**Richardson,** Richard Hawkins, *Merchant.* 6 & 7, Clive Street, Calcutta.

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Date of Election.		
5-7-26	N	**Richey,** JAMES ALEXANDER, C.I.E., *Educational Commissioner with the Government of India.* Simla.
3-4-18	F	**Robinson,** HERBERT C., *Director of Museums and Fisheries, Federated Malay States.* Kuala Lumpur.
3-12-24	F	**Roerich,** GEORGE NICHOLAS, M.A., M.R.A.S., *Orientalist.* 310, Riverside Drive, New York, U.S.A.
3-12-24	N	**Rogers,** T. E., *Tea Planter.* Mariani Tea Estate, Mariani, Assam.
3-3-20	A	**Ronaldshay,** THE EARL OF. England.
7-5-24	R	**Rose,** G. F., *Merchant; Director, Messrs. Andrew Yule & Co., Ltd.* 8, Clive Row, Calcutta.
4-12-01	F	*__Ross,__ SIR EDWARD DENISON, KT., C.I.E., PH.D., F.A.S.B., *Director, School of Oriental Studies.* Finsbury Circus, London, E.C.2.
3-7-18	R	**Roy,** BIDHAN CHANDRA, B.A. (CAL.), M.D., F.R.C.S., M.R.C.P. (LOND.). 36, Wellington Street, Calcutta.
7-9-21	R	**Roy,** HEM CHANDRA. 76/1A, Upper Circular Road, Calcutta.
3-12-24	R	**Roy,** P. L., BARRISTER-AT-LAW. 15, Store Road, Calcutta.
5-2-19	R	**Roy,** SASADHAR. 48/1, Chaulpatty Road, Bhawanipur, Calcutta.
7-7-20	R	**Roy-Chaudhuri,** HEM CHANDRA, M.A., PH.D. 43/2, Amherst Street, Calcutta.
5-11-24	R	**Roy-Choudhuri,** HIRAN KUMAR. 1/2, Nursing Lane, Calcutta.
6-8-24	R	**Roy-Chowdhury,** BRAJENDRA KISHORE, *Zemindar, Mymensingh.* 53, Sukea Street, Calcutta.
5-5-15	N	**Rushbrook-Williams,** L. F., C.B.E., M.A., B.LITT. (OXON.), M.R.A.S., F.R.HIST.S. Home Department, Government of India, Delhi.
1-2-26	N	**Ruthnaswamy,** M., *President, Legislative Council.* Madras.
1-4-25	R	**Sadiq,** SYED MOHAMMAD, *Unani Physician.* 11, Harin Bari 1st Lane, Calcutta.
5-4-16	N	**Saha,** RADHIKA NATH, M.R.A.S., *Medical Practitioner.* 16, Lachmikundu, Benares City, U.P. [Lucknow.
5-11-24	N	**Sahni,** B., D.SC., *Professor of Botany.* The University,
1-4-25	N	**Sales,** HAROLD SPENCE, M.I.E. (IND.), *Formerly Fellow, Punjab University; Bridge Engineer, E.B.R.* No. 2, Bungalow, Paksey.
2-11-25	R	**Sanaullah,** MUHAMMAD, M.A., *Professor of Arabic and Persian, Presidency College.* 16, Hyat Khan Lane, Sealdah, Calcutta.
7-6-26	R	**Sandstrom,** EARL RUSSELL, *Banking, International Banking Corporation.* 4, Clive Street, Calcutta.
3-12-24	R	**Sarkar,** C. K., C.E., *Engineer and Architect.* 10, Hastings Street, Calcutta.
1-11-22	N	**Sarkar,** SURESH CHANDRA, *Dy. Magistrate and Dy. Collector.* Barganda, Giridih.
1-4-25	N	**Sarraf,** B. L., B.A., LL.B., *Lawyer.* Sarrafa Bazar, Saugor, C.P.
3-3-09	R	**Sarvadhikary,** SIR DEVA PRASAD, KT., C.I.E., O.B.E., C.B.E., M.A., B.L., F.C.U., LL.D. (ABERDEEN), L.L.D. (ST. ANDREWS), SURIRATNA, VIDYARATNAKAR, JNANASINDHU. 20, Suri Lane, Entally, Calcutta.
1-4-25	R	**Sen,** BINOY CHANDRA, M.A., *Professor of History, City College.* 7, Bishwakosh Lane, Baghbazar, Calcutta.

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Date of Election.		
3-12-24	R	**Sen,** H. K., M.A., D.Sc. (London), D.I.C., *Professor of Chemistry, University College of Science.* 92, Upper Circular Road, Calcutta.
1-2-26	N	**Sen,** Hridayranjan, M.A., B.L., *Bengal Civil Service (Executive Branch).* Mymensingh.
7-5-02	R	**Sen,** Jogindranath, M.A., Vidyaratna, Vidyabhusan. 32, Prasanna Kumar Tagore Street, Calcutta.
5-12-23	L	**Sen,** Lakshman, H. H. Raja of Sundarnagar. Suket State, Punjab.
1-4-14	N	**Sen-Gupta,** Naresh Chandra, M.A., D.L. Ramna, Dacca.
5-4-26	N	**Senior-White,** Ronald, F.E.S., F.R.S.T.M. & H. Central Malaria Bureau, Kasauli, Simla Hills.
1-12-97	R	**Seth,** Mesrovb Jacob, M.R.A.S., M.S.A., F.R.S.A., *Examiner in Classical Armenian to the Calcutta University.* 19, Lindsay Street, Calcutta.
1-2-26	R	**Setna,** S. B., M.Sc., *Lecturer, The Royal Institute of Science.* Bombay.
5-7-11	R	***Sewell,** Robert Beresford Seymour, M.A., M.R.C.S., L.R.C.P., F.Z.S., F.L.S., F.A.S.B., Lt.-Col., I.M.S. Indian Museum, Calcutta.
7-2-23	R	**Shanks,** George, Major, I.M.S., *Professor of Pathology.* Medical College, Calcutta.
2-11-25	R	**Sharif,** Mohammad, M.Sc., F.R.M.S. Zoological Survey of India, Indian Museum, Calcutta.
3-12-23	R	**Shastri,** Ashutosh. 23/1, Beniatola Lane, Calcutta.
4-2-85	L	***Shāstrī,** Haraprasad, Mahāmahopādhyāya, C.I.E., M.A., D.Litt. F.A.S.B., Hon. Member, R.A.S. 26, Pataldanga Street, Calcutta.
2-5-23	N	**Shebbeare,** E. O., *Conservator of Forests.* Darjeeling.
3-12-24	R	**Shipway,** F. W. 345/6/7, Grand Hotel, Calcutta.
6-1-09	N	**Shirreff,** Alexander Grierson, B.A., I.C.S. Sitapur, U.P.
4-1-26	R	**Shortt,** H. E., Major, I.M.S., *Director, Kala-azar Commission.* Golaghat, Assam.
3-12-24	N	**Siddiqi,** A., M.A. (Allahabad), Ph.D. (Göttingen), *Professor of Arabic and Islamic Studies, Dacca University.* Ramna, Dacca.
5-3-13	L	***Simonsen,** John Lionel, D.Sc., F.I.C., F.A.S.B. Indian Institute of Science, Bangalore.
6-2-18	N	**Singh,** Badakaji Marichi Man. 38, Khichapokhari, Kathmandu, Nepal.
6-12-26	R	**Singh,** Bawa Ramnik, Rai Bahadur, *Civil Engineer, E. B. Ry.* 3, Koilaghat Street, Calcutta.
29-8-99	N	**Singh,** Sir Prabhu Narain, H. H. The Maharaja Bahadur, G.C.I.E., G.C.S.I., Maharaja of Benares. Ramnagar Fort, Benares.
7-4-09	N	**Singh,** Prithwipal, Raja, F.R.G.S., F.R.S.A., F.T.S., *Talukdar of Surajpur.* Chandrahas Palace, Hathaunda, Barabanki, Oudh.
6-11-99	L	**Singh,** Sir Rameshwar, H. H. The Hon'ble Maharajadhiraja, G.C.I.E., K.B.E., D.Litt., F.R.A.S., F.P.U. Darbhanga.
5-11-19	N	**Singh,** Shyam Narayan, Rai Bahadur, M.B.E., M.L.A., Bihar and Orissa Civil Service. Patna, E.I.R.
7-2-94	N	**Singh,** Vishwa Nath, H. H. The Maharaja Bahadur. Chhatturpur, Bundelkhund.
6-2-18	N	**Singha,** Kumar Arun Chandra, M.A. Dacca.

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Date of Election.		
3-6-25	R	**Singhania,** PARSHOTAMDAS, *Merchant.* 3-1, Mangoe Lane, Calcutta.
3-4-18	N	**Sinha,** BHUPENDRA NARAYAN, RAJA BAHADUR, B.A. Nashipur Rajbati, Nashipur.
1-2-22	R	**Sinha,** KUMAR GANGANANDA, M.A., *Zemindar.* 7, Dedarbaksh Lane, Calcutta.
4-3-25	R	**Sinha,** PURNA CHANDRA, *Landholder.* 146, Baranoshi Ghosh Street, Jorasanko, Calcutta.
2-7-13	N	**Sinha,** RUDRA DATTA, M.A., LL.B., M.R.A.S. Nazirabad Road, Lucknow.
5-9-12	N	**Singhi,** BAHADUR SINGH. Azimgunj, Murshidabad.
4-1-26	N	**Sinton,** J. A., O.B.E., Major, I.M.S., V.C., *Officer-in-Charge, Malaria Bureau, Central Research Institute.* Kasauli.
5-7-16	R	**Sircar,** GANAPATI, VIDYARATNA. 69, Beliaghatta Main Road, Calcutta.
5-3-24	R	**Sircar,** N. N., M.A., B.L., BARRISTER-AT-LAW. 36/1, Elgin Road, Calcutta.
5-3-24	R	**Sircar,** SIR NIL RATAN, KT., M.A., M.D., *Physician.* 7, Short Street, Calcutta.
2-6-20	A	**Skinner,** S. A., *Engineer and Director, Messrs. Jessop & Co., Ltd.* 93, Clive Street, Calcutta.
1-3-26	R	**Snaith,** JOHN FRANK, *Managing Director, Messrs. Hamilton & Co.* 8, Old Court House Street, Calcutta.
3-5-26	N	**Sohan Lal,** L., B.A., B.T., *Lecturer in Geography and History, Central Training College.* Lahore.
2-8-26	R	**Sohoni,** VISHVANATH VISHNU, B.A., B.SC., *Meteorologist, The Observatory, Alipore.* Calcutta.
5-4-26	N	**Sondhi,** GAUTAM. 6, Kacheri Road, Lahore.
7-3-23	N	**Stamp,** L. DUDLEY, B.A., D.SC. University of London, London School of Economics, Houghton Street, London, W.C. 2.
4-1-26	R	**Stapleton,** GRACE, (Miss), M.D., B.S. (LONDON), *Superintendent, Dufferin Hospital.* Calcutta.
28-9-04	L	**Stapleton,** HENRY ERNEST, M.A., B.SC., I.E.S. *Offg. Director of Public Instruction, Bengal.* 8, Galstaun Mansions, Calcutta.
7-12-25	R	**Stark,** LEONARDUS, *Banker.* c/o Netherlands India Commercial Bank, Dalhousie Square, Calcutta.
6-5-25	R	**Staub,** MAX, *Consul for Switzerland.* 100, Clive Street, Calcutta.
2-12-08	N	**Steen,** HUGH BARKLEY, M.D., LT.-COL., I.M.S. *Medical Officer, Port Commissioners.* Calcutta.
2-11-25	N	**Stocks,** C. DE BEAUVOIR, (MRS.). c/o Postmaster, Kalimpong.
1-8-23	N	**Stow,** ALEXANDER MONTAGU, O.B.E., M.A. (CANTAB.), I.C.S., *Chief Commissioner.* Delhi.
1-11-22	R	**Strickland-Anderson,** (MRS.). 1, Alipur Park, Calcutta.
5-6-07	R	***Suhrawardy,** ABDULLAH AL-MA'MUN, IFTIKHARUL MILLAT, M.A., BARRISTER-AT-LAW, D.LITT., LL.D., F.A.S.B. 56, Mirzapur Street, Calcutta.
7-6-20	R	**Suhrawardy,** HASSAN, MAJOR, M.D., F.R.C.S., I.T.F.M.C., *Chief Medical Officer, E. B. Ry.* 2, Belvedere Park, Alipur, Calcutta.
3-3-20	N	**Sundararaj,** BUNGURU, M.A., PH.D., *Director of Fisheries.* Madras.
4-1-26	R	**Sur,** S. N., M.B., D.P.H., D.T.M., *Assistant Director of Public Health, Writers' Buildings.* Calcutta.

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6-1-09	R	**Tagore,** KSHITINDRANATH, B.A., TATTWANIDHI. 5/1*B*, Baranashi Ghose 2nd Lane, Jorasanko, Calcutta.
6-4-98	R	**Tagore,** SIR PRADYOT COOMAR, KT., MAHARAJA BAHADUR. Pathuriaghatta, Calcutta.
6-7-04	F	**Talbot,** WALTER STANLEY, C.I.E., I.C.S., (*retired*). Glenhurst Esher, Surrey, England.
1-4-25	R	**Taraporewala,** IRACH J. S., B.A., PH.D., BARRISTER-AT-LAW, *Professor of Comparative Philology, University of Calcutta.* 77-9, Dharamtola Street, Calcutta.
31-8-93	L	**Tate,** GEORGE PASSMAN. 56, Cantonment, Bareilly, U.P.
7-12-21	N	**Telang,** P. K., *Professor of History, Hindu University.* Benares City.
5-6-78	F	**Temple,** SIR RICHARD CARNAC, BART., C.B., C.I.E., F.B.A., F.S.A., *Formerly Lieutenant-Colonel, Indian Army.* c/o Lloyds Bank, Ltd., Cox's and King's Branch, 6, Pall Mall, London, S. W.
4-8-09	N	**Thompson,** SIR JOHN PERRONET, KT., C.S.I., M.A., I.C.S., *Chief Secretary, Govt. of the Punjab.* United Service Club, Simla.
1-6-04	R	***Tipper,** GEORGE HOWLETT, M.A., F.G.S., M.INST.M.M., F.A.S.B. Geological Survey of India, Indian Museum, Calcutta.
3-8-25	N	**Tomar,** UDAI VIR SINGH, B.A., *Superintendent and Teacher, R. P. High School, Panna.* Bundelkhand, C.I.
4-1-26	N	**Tomb,** JOHN WALKER, O.B.E., M.A., M.D., D.P.H., *Chief Medical Officer, Asansol Mines' Board of Health.* Asansol.
5-12-17	A	**Tripathi,** RAMPRASAD, *Reader in Modern Indian History.* The University, Allahabad.
5-7-26	A	**Tyson,** JOHN DAWSON, I.C.S. U.S. Club, Calcutta.
6-5-25	R	**Ukil,** AMULYA CHANDRA, M.B. (CAL.), *Professor of Bacteriology, National Medical Institute, and Assistant Director, Clinical Research Association.* 6/1, Kanklia Road, Ballygunge, Calcutta.
5-11-24	R	**Vaile,** MAURICE ARTHUR STUART. *Exchange Broker, Messrs. Thomas Seth Apcar & Co.* 8, Clive Street, Calcutta.
6-7-25	N	**Varma,** SOHAN LAL, *Honorary Magistrate, Banking and Zemindari.* Laharpur, Sitapur District.
7-12-25	R	**Varugis,** GEORGE, B.SC. (WALES). c/o Prof. K. Zachariah, 33/1, Amherst Street, Calcutta.
27-9-94	R	**Vasu,** NAGENDRA NATH. 20, Visva Kosh Lane, Baghbazar, Calcutta.
1-2-26	N	**Viswanath,** B., *Fellow, Chemical Society of London; Fellow, Chemical Society of India; Officiating Government Agricultural Chemist.* Lawley Road, Coimbatore.
6-3-01	L	**Vogel,** JEAN PHILIPPE, LITT.D., F.A.S.B. The University, Lieden, Holland.
27-9-94	L	***Vost,** WILLIAM, LT.-COL., I.M.S. 26, Crystal Palace Part Road, Sydenham, London, S.E. 26.
1-11-26	N	**Wadhwana,** M. M., *Demonstrator in Geology and Geography, University College.* Rangoon.
6-5-25	R	**Wadia,** D. N., M.A., B.SC., F.R.G.S., F.G.S., *Geological Survey of India.* Indian Museum, Calcutta.
3-6-25	R	**Walton,** ERIC BELL, *Chartered Civil Engineer.* 93, Park Street, Calcutta.

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1-12-09	N	**Webster,** J. E., I.C.S. Sylhet, Assam.
1-11-26	R	**Westcott,** Foss, The Most Reverend, D.D. (Cantab.), Honorary D.D. (Oxon.), *Lord Bishop of Calcutta and Metropolitan of India, Burma and Ceylon.* Bishop's House, 51, Chowringhee, Calcutta.
19-9-06	L	**Whitehead,** Richard Bertram, I.C.S. Rupar, Ambala, Punjab.
6-1-15	N	**Whitehouse,** Richard H., D.Sc., I.E.S. Central Training College, Lahore.
7-5-19	A	**Wills,** Cecil Upton, B.A., I.C.S. Nagpur.
7-3-06	A	**Woolner,** Alfred Cooper, C.I.E., M.A. Punjab University, Lahore.
1-4-08	R	**Wordsworth,** William Christopher, M.A., I.E.S. (Retd.). c/o The "Statesman," 6, Chowringhee, Calcutta.
5-2-19	N	**Yazdani,** Ghulam, M.A. Hyderabad, Deccan.
6-6-06	N	**Young,** Mansel Charles Gambier. Khagaul, Dinapore, E.I.R.
4-1-26	N	**Younus,** Muhammad, *Assistant Director-General of Police, H.E.H. the Nizam's Government, Saifabad.* Hyderabad (Deccan).

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ORDINARY MEMBERS.

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1870
April 7. Lyman, B. Smith
1873.
Jan. 2. Houstoun, G. L.
1878.
June 5. Temple, Sir Carnac
1880.
April 7. Rai, B. C.
1884.
Sept. 3. Miles, W. H.
Nov. 5. Middlemiss, C. S.
1885.
Feb. 4. Shastri, Haraprasad
1886.
Mar. 3. Mehta, R. D.
1887.
Aug. 25. Criper, W. R.
1888.
June 6. Pennell, A. P.
1889.
Mar. 6. La Touche, T. H. D.
Aug. 29. Nimmo, J. D.
Nov. 6. Phillott, D. C.
1890.
Mar. 5. Ray, Sir Prafulla, C.
1892.
Jan. 6. Haig, Sir T. Wolseley
,, 11. Maclagan, Sir Edward D.
Feb. 1. Bodding, P. O.
1893.
Aug. 31. Tate, G. Passman
Sept. 28. Chaudhuri, B. L.
1894.
Feb. 7. Singh, Maharaja Vishwa Nath
Sept. 27. Bose, N. N.
,, ,, Vost, W.
1895.
Mar. 6. Bose, Sir Jagadis C.
July 3. Beatson-Bell, Sir Nicholas D.
Sept. 19. De, K. C.
1896.
Jan. 8. Burn, Sir Richard
1897.
Dec. 1. Seth, M. J.
1898.
Jan. 5. Dods, W. K.
Feb. 2. Bose, A. L.
Mar. 2. Barnes, H. C.
April 6. Tagore, Sir Pradyot C.
May 4. Mookerjee, Sir R. N.
1899.
Aug. 29. Singh, Sir Prabhu Narain
Sept. 29. Mukerjee, J. N.
Nov. 6. Singh, Sir Rameshwara
1900.
Dec. 5. Grieve, J. W. A.

1901.
Mar. 6. Khan, H. R.
,, ,, Vogel, J. P.
June 5. Mann, H. H.
Dec. 4. Ross, Sir Edward D.
1902.
Feb. 5. Shyam Lal.
May. 7. Sen, J. N.
July 2. Doxey, F.
1904.
June 1. Pilgrim, G. E.
,, ,, Tipper, G. H.
July 6. Aulad Hasan.
,, ,, Talbot, W. S.
Aug. 3. Fermor, L. L.
,, ,, Stapleton, H. E.
1905.
Jan. 4. Rankin, J. T.
Mar. 1. Banerji, M.
May 3. Graves, H. G.
July 5. Ghosh, A. C.
Aug. 2. McCay, D.
1906.
Jan. 3. Chapman, J. A.
Mar. 7. Nahar, P. C.
,, ,, Woolner, A. C.
June 6. Mitra, K. M. N.
,, ,, Young, M. C. G.
Sept. 19. Whitehead, R B.
Oct. 31. Finlow, R. S.
Dec. 5. Mahalanobis, S. C.
,, ,, Tek Chand.
1907.
Jan. 2. Banerji, R. D.
June 5. Suhrawardy, A. A.
July 3. Brown, J. C.
,, ,, Christie, W. A. K.
Aug. 7. Haines, H. H.
1908.
Jan. 1. Brahmachari, U. N.

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70	Feb.	5.	Mukhopadhyaya, G. N.
	April	1.	Harrison, E. P.
	,,	,,	Wordsworth, W. C.
	June	3.	Jones, H. C.
	Nov.	4.	Bhattacharji, B.
75	Dec.	2.	Steen, H. B.
	1909.		
	Jan.	6.	Shirreff, A. G.
	,,	,,	Tagore, K.
	Mar.	3.	Abdul Latif.
	,,	,,	Chakravarti, N.
80	,,	,,	Mukerjee, B. [P.
	,,	,,	Sarvadhikary, Sir D.
	April	7.	Bentley, C. A.
	,,	,,	Kilner, J. N.
	,,	,,	Singh, P.
85	July	7.	Bazaz, R. K.
	,,	,,	Bhattacharji, S. N.
	Aug.	4.	Thompson, Sir J. P.
	Oct.	6.	Brown, P.
	,,	,,	Brühl, P.
90	,,	7.	Gangoli, O. C.
	Nov.	3.	Christophers, S. R.
	Dec.	1.	Webster, J. E.
	1910.		
	Mar.	2.	Greig, E. D. W.
	,,	,,	Kirkpatrick, W.
95	May	4.	Dhavle, S. B.
	,,	,,	Kemp, S. W.
	July	6.	Botham, A. W.
	Sept.	7.	Gravely, F. H.
	,,	,,	Ray, S. K.
	1911.		
100	Feb.	1.	Insch, J.
	,,	,,	Law, N. N.
	Mar.	1.	Mahatap, Sir Bijoy Chand
	May	3.	Atkinson, A. C.
	,,	,,	Lomax, C. E.
105	June	7.	Chatterjee, K. K.
	,,	,,	Hosain M. H.
	July	5.	Sewell, R. B. S.
	Nov.	1.	Ahmed K.
	,,	,,	Ecsh, V. J.
	1912.		
110	Jan.	10.	Kazim Shirazi, A. M.
	May	1.	Harley, A. H.
	June	5.	Misra, C.
	July	3.	Andrews, E. A.
	,,	,,	Bomford, T. L.
115	Sept.	4.	Ghosh, T.
	,,	,,	Singhi, B. S.
	1913.		
	Mar.	5.	Simonsen, J. L.
	April	2.	Calder, C. C.
	June	4.	Majumdar, R. C.
120	July	2.	Norton, E. L.
	,,	,,	Sinha, R.
	Nov.	5.	Fox, C. S.
	1914.		
	Feb.	4.	Nawab Ali Chaudhury.
	Mar.	4.	Bacot, J.
	April	1.	Chaudhuri, G. D. 125
	,,	,,	Sen-Gupta, N. C.
	July	1.	Law, S. C.
	Aug.	5.	Law, B. C.
	1915.		
	Jan.	6.	Whitehouse, R. H.
	Feb.	3.	Ahmad Ali Khan, H. 130
	April	7.	Belvalkar, S. K.
	,,	,,	Ohtani, Count K.
	May	5.	Rushbrook-Williams, L. F.
	Aug.	4.	Gurner, C. W.
	Sept.	1.	Cleghorn, M. L. W. 135
	,,	,,	Das-Gupta, H. C.
	Oct	27.	Chatterjee, Sir A. C.
	1916.		
	Jan.	5.	Chatterjee, K. N.
	,,	,,	Hamilton, C. J.
	Feb.	2.	Majumdar, N. K. 140
	,,	,,	Mohammad Yusuf.
	April	5.	Saha, R. N.
	June	7.	Mahajan, S. P.
	July	5.	Naseer Hosein, K.
	,,	,,	Sarkar, G. 145
	1917.		
	April	4.	Awati, P. R.
	,,	,,	Datta, R. L.
	June	6.	Deb, H. K.
	,,	,,	Gupta, K.
	,,	,,	Aiyangar, K. V. R. 150
	Aug.	1.	Bhandarkar, D. R.
	Oct.	3.	Bose, S. N.
	Dec.	5.	Tripathi, R.
	1918.		
	Feb.	6.	Banerji, N. N.
	,,	,,	Ghosh, E. N. 155
	,,	,,	Maitra, S. K.
	,,	,,	Manen, Johan van
	,,	,,	Singh, B. M.
	,,	,,	Singha, A. C.
	April	3.	Das, J. R. 160
	,,	,,	Prashad, B.
	,,	,,	Robinson, H. C.
	,,	,,	Sinha, B. N.
	July	3.	Roy B. C.
	,,	,,	Basu, C. C. 165
	Aug.	7.	Maitra, J. N.
	Sept.	25.	Narayan, V. N.
	1919.		
	Feb.	5.	Abdul Kader.
	,,	,,	Moreno, H. W. B.
	,,	,,	Ray, S. 170
	,,	,,	Yazdani, G.
	Mar.	5.	Gupta, S. P.
	April	2.	Bal, S. N.
	,,	,,	Friel, R.
	,,	,,	Mitra, P. 175

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	May	7.	Wills, C. U.
	June	4.	Matthai, G.
	July	2.	Banerji, P.
	Oct.	10.	Manry, J. C.
180	Nov.	5.	Gambhir, J. S.
	,,	,,	Hemraj, R.
	,,	,,	Misra, P. N.
	,,	,,	Pascoe, Sir E. H.
	,,	,,	Singh, S. N.
	1920.		
185	Jan.	5.	Aiyar S. P.
	,,	,,	Suhrawardy, H.
	Feb.	4.	Hill, H. B. C.
	,,	,,	Keir, W. I.
	,,	,,	Brij Narayan.
190	Mar.	3.	Ballardie, J. H. de Caynoth.
	,,	,,	Ganguli, P.
	,,	,,	Khuda Bukhsh, S.
	,,	,,	Lahiri, J.
	,,	,,	Mahalanobis, P. C.
195	,,	,,	Sundara Raj, B.
	,,	,,	Raye, N. N. [Earl of
	,,	,,	Ronaldshay, The
	April	7.	Dutt, K. K.
	May	5.	Ghosh, S. N.
200	,,	,,	Harcourt, E. S.
	June	2.	Majumdar, N. G.
	,,	,,	Skinner, S. A.
	July	7.	Kar, S. C.
	,,	,,	Knowles, R.
205	,,	,,	Roy-Chaudhuri, H. C.
	Aug.	4.	Dikshit, K. N.
	,,	,,	Martin, O.
	,,	,,	Panikker, N. P.
	Sept.	1.	Chakladar, H. C.
210	,,	,,	Chanda, R.
	,,	,,	Chatterjee, N C.
	Dec.	1.	Connor, Sir F. P.
	,,	,,	Akbar Khan, M.

	1921.		
	Jan.	5.	Ray, J.
215	Feb.	2.	Jain, Chhote Lall
	,,	,,	Mukerjee, R.
	,,	,,	Mookerjee, S. C.
	Mar.	2.	Acton, H. W.
	,,	,,	Agharkar, S. P.
220	May	4.	Barnardo, F. A. F.
	June	1.	Muzamilullah Khan Mohammad
	Sept.	7.	Deb. P. K.
	,,	,,	Roy, H C.
	Nov.	2.	Hora, S. L.
225	,,	,,	Huq, S. E.
	Dec.	7.	Kumar, A. K.
	,,	,,	Barua, B. M.
	,,	,,	Telang, P. K.
	1922.		
	Feb.	1.	Bhattacharya, V. S.
230	,,	1.	Chopra, R. N.
	Feb.	1.	Megaw, J. W. D.
	,,	,,	Raman, C. V.
	,,	,,	Sinha, Kumar G.
	April	5.	Abdul Ali, A. F. M.
	,,	,,	Banerjee, S. 235
	,,	,,	Bose, J. C.
	,,	,,	Fülep, E. G.
	June.	7.	Bhattacharya, S. P.
	July.	5.	Mookerjee, R. K.
	Sept.	6.	Das-Gupta, S. N. 240
	Nov.	1.	Anderson, Mrs. S.
	,,	,,	Sarkar, S. C.
	Dec.	6.	Blackett, Sir Basil P.
	1923.		
	Feb.	7.	Barber, C. T.
	,,	,,	Jinavijayaji, Muni 245
	,,	,,	Shanks, G.
	Mar.	7.	Gupta, N.
	,,	,,	Labey, G. T.
	,,	,,	Nandi, P.
	,,	,,	Stamp, L. D. 250
	April	4.	Alker, A. [R. von
	May	2.	Collenberg, Baron H.
	,,	,,	Harnett, W. L.
	,,	,,	Möller, H. P.
	,,	,,	Shebbeare, E. O. 255
	June	6.	Das, K.
	,,	,,	Howard, A.
	,,	,,	Hutton, J. H.
	,,	,,	Ottens, N.
	Aug.	1.	Biswas, K. 260
	,,	,,	Stow, A. M.
	Dec.	5.	Chopra, B. N.
	,,	,,	Meggit, F. J.
	,,	,,	Shastri, A.
	,,	,,	Barwell, N. F. 265
	,,	,,	Jackson, P. S.
	,,	,,	Korke, V. T.
	,,	,,	Sen, H. H. Lakshman
	,,	,,	Pande, S. B.
	1924.		
	Feb.	6.	Mahindra, K. C. 270
	Mar.	5.	Austin, J. M.
	,,	,,	Banerjee, P. N.
	,,	,,	Basu, D. N.
	,,	,,	Bose, S.
	,,	,,	Browne, H. 275
	,,	,,	Das, S. R.
	,,	,,	Ray Chowdhury, M. N.
	,,	,,	Fitzpatrick, H.
	,,	,,	Kanjilal M. N.
	,,	,,	Mukerji, S. 280
	,,	,,	Murray, Sir Alexander
	,,	,,	Martin, T. L.
	,,	,,	Mitter, P. C.
	,,	,,	Mitter, Sir B. C.
	,,	,,	Mitter, Sir B. L. 285
	,,	,,	Mitter, D. N.
	,,	,,	Mukherjee, N. N.
	,,	,,	McPherson, J.
	,,	,,	Greaves, Sir Ewart

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1925.

Mar. 5 Chatterji, M. M.
,, ,, Sircar, N. N.
,, ,, Sircar, Sir N. R.
April 2. Bahl, K. N.
,, ,, Das, B. M.
,, ,, Ghose, K.
,, ,, Hington, R. W. G.
,, ,, Judah, N. J.
,, ,, Ray, J. N.
,, ,, Raha, S. K.
,, ,, De, F. L.
,, ,, Richards, F. J.
,, ,, Huq, M.
,, ,, Mitra, J. C.
,, ,, Ghose, Sir C. C.
,, ,, Mitsukuri, R.
May 7. Rose, G. F.
,, ,, Nait, S. R.
,, ,, Bhattacharya, B.
June 4. Cooper, H.
July 2. Ray, A. C.
,, ,, Ghose, B. B.
,, ,, Browne, L. E.
,, ,, Iyengar, M. O. P.
,, ,, Mookerjee, S. P.
,, ,, Ray, B. C.
Aug. 6. Chatterji, S. K.
,, ,, Nyss, Wm. B. S.
,, ,, Moloney, Wm. J.
,, ,, Roy-Chowdhury, B .K.
,, ,, Davies, L. M.
,, 27. Chattopadhyay, K. P.
,, ,, Roy Chaudhuri, H. K.
,, ,, Baidil, A. M.
,, ,, MacGregor, A. D.
Sept. 24. Sahni, B.
,, ,, Eaton, Miss W. A.
,, ,, Mookerji, B. N.
,, ,, Asaduzzaman.
Nov. 5. Vaile, M. A. S.
,, ,, Kapur, S.
,, ,, Nazir Ahmad, H.
Dec. 3. Siddiqi, A.
,, ,, Das, S. N.
,, ,, Roy, P. L.
,, ,, Mookerjee, J. N.
,, ,, Newman, Chas. F.
,, ,, Gilbert, W. G. L.
,, ,, Rao, H. S.
,, ,, Pushong, E. S.
,, ,, Rogers, T. E.
,, ,, Shipway, F. W.
,, ,, Basu, J. N.
,, ,, Ghose, S. C.
,, ,, Sarkar, C. K.
,, ,, Chatterjee, S. N.
,, ,, Hendry, C. A.
,, ,, Mukherjee, P. N.
,, ,, Roerich, G. N.
,, ,, Sen, H. K.

Jan. 7. Banerjee, M. N.
,, ,, Chaudhuri, H. C.
,, ,, Chaudhuri, S. M.
Feb. 4. Bhor, S. C.
,, ,, Bishop, T. H.
,, ,, Bose, D. N.
,, ,, Dutt, K. C.
,, ,, Ganguly, J. N. C.
,, ,, Guha, B. S.
,, ,, Menon, K. R.
Mar. 4. Banerjee, A. C.
,, ,, Benthall, E. C.
,, ,, Bhatnagar, J. L.
,, ,, Buyers, W. A.
,, ,, Chaudhuri, J.
,, ,, Das, A. N.
,, ,, Deb, Kshitindra
,, ,, Fosket, R. C.
,, ,, Ghosh, G. C.
,, ,, Hossain, M. B.
,, ,, Mitter, P. C.
,, ,, Pochhammer, W. von
,, ,, Poddar H. P.
,, ,, Sinha, P. C.
April 1. Banerjee, A. C.
,, ,, Perier, F.
,, ,, Hobbs, H
,, ,, Ismail, A. M.
,, ,, Jennaway, J. H.
,, ,, Laden La, S. W.
,, ,, Mitter, B. P. D.
,, ,, Oaten, E. F.
,, ,, Sadiq, H. S. M.
,, ,, Sales, H. S.
,, ,, Sarraf, B. L.
,, ,, Sen, B. C.
,, ,, Prasad, S.
,, ,, Taraporewala, I. J. S.
May 6. Abbasi, M. A.
,, ,, Baral, J. C.
,, ,, Batra, H. L.
,, ,, Bery, A. R.
,, ,, Bose, H. M.
,, ,, Habib Ullah, Md.
,, ,, Inamdar, R. S.
,, ,, Jatia, Sir O. M.
,, ,, Khanna, V. L.
,, ,, Koester, Hans.
,, ,, Kolah, K. S.
,, ,, Mukerjee, J. N.
,, ,, Rao, M. V.
,, ,, Staub, Max.
,, ,, Ukil, A. C.
,, ,, Wadia, D. N.
June 3. Datta, S. K.
,, ,, Gupta, T. P.
,, ,, Lal, B. B.
,, ,, Musa, M. M.
,, ,, Richardson, R. H.
,, ,, Singhania, P.

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410	June	3.	Walton, E. B.
	July	6.	Bose, M. M.
	,,	,,	Varma, S. L.
	Aug.	3.	Chhibber, H. L.
	,,	,,	Coyajee, Sir J. C.
415	,,	,,	Pruthi, H. S.
	,,	,,	Reuben, D. S.
	,,	,,	Tomar, U. V. S.
	Nov.	2.	Acharya, P.
	,,	,,	Bradshaw, E. J.
420	,,	,,	Chattopādhyāya, K. C.
	,,	,,	Crookshank, H.
	,,	,,	Gee, E. R.
	,,	,,	Hamid, M.
	,,	,,	James, R. C.
425	,,	,,	Kimura, R.
	,,	,,	Kuppaswamy, V. S.
	,,	,,	Kureishy, R. A.
	,,	,,	Mirza, M. B.
	,,	,,	Ormond, E. C.
430	,,	,,	Sanaullah, M.
	,,	,,	Sharif, M.
	,,	,,	Stocks, Mrs. C. de Beauvoir
	Dec.	7.	Afzal, S. M.
	,,	,,	Carritt, S. E.
435	,,	,,	Derviche-Jones, A.
	,,	,,	Lindsay, J. H.
	,,	,,	Narayanaswami, V.
	,,	,,	Stark, L.
	,,	,,	Varugis, G.
	1926.		
440	Jan.	4.	Bathgate, Mrs. J. B.
	,,	,,	Bathgate, R. G. M.
	,,	,,	Becker, J. N.
	,,	,,	Brahmachari, I. B.
	,,	,,	Chatterji, K. C.
445	,,	,,	Cunningham, J.
	,,	,,	Fleming, Andrew
	,,	,,	Gaffar, Abdul
	,,	,,	Habib, Mohammad
	,,	,,	Hubert, Otto.
450	,,	,,	Lamba, G. S.
	,,	,,	Murray, H.
	,,	,,	Nomani, H. H.
	,,	,,	Shortt, H. E.
	,,	,,	Sinton, J.A.
455	,,	,,	Stapleton, G. (Miss)
	,,	,,	Sur, S. N.
	,,	,,	Tomb, J. W.
	,,	,,	Younus, Muhammad
	Feb.	1.	Edwards, C. A. H.
460	,,	,,	Ruthnaswamy, M.
	,,	,,	Meston, Lord.
	,,	,,	Rao, T. R.
	,,	,,	Husain, M. A.
	,,	,,	Gulati, A. N.
465	,,	,,	Setna, S. B.
	,,	,,	Lele, S. H.
	,,	,,	Asana, J. J.
	Feb.	1.	Viswanath, B.
	,,	,,	Bose, S. R.
	,,	,,	Goswami, M. N.
470	,,	,,	Narke, G. G.
	,,	,,	Chaudhuri, H.
	,,	,,	Kashyap, S. R.
	,,	,,	Parija, P. K.
	,,	,,	Batia, B. L.
475	,,	,,	Ghuznavi, Sir A. K.
	,,	,,	Khaitan, D. P.
	,,	,,	Sen, H.
	,,	,,	Hingston, H.
	,,	,,	Harris, H. G.
480	,,	,,	Ghuznavi, A. H.
	,,	,,	Khambata, R. B.
	,,	,,	Chand, Lal.
	,,	,,	Baptist, A. E.
	Mar.	1.	Bannerjee, W. C.
485	,,	,,	McKay, J. W.
	,,	,,	Mookerjee, S. C.
	,,	,,	Snaith, J. F.
	,,	,,	Gupta, D. N.
	,,	,,	Mukherjee, A. N.
490	,,	,,	Datta, H. N.
	,,	,,	Basu, N. K.
	,,	,,	Kramrisch, Stella (Miss)
	,,	,,	Bagnall, J. F.
	April	5.	Sondhi, G.
495	,,	,,	Chokhany, R. D.
	,,	,,	Gupta, S. N.
	,,	,,	Bose, G. S.
	,,	,,	Senior-White, R.
	,,	,,	Ghose, B. C.
500	,,	,,	Parker, R. H.
	,,	,,	Bhatia, M. L.
	,,	,,	Mitter, K. N.
	,,	,,	Jones, T.
	,,	,,	Mukherjee, K.
505	,,	,,	Mitter, K. K.
	May	3.	Sohan Lal, L.
	,,	,,	Bhagwant Rai.
	,,	,,	Bhaskaraiya, C.
	,,	,,	Kirwan, E. W. O'G.
510	June	7.	Outhwaite, H. A.
	,,	,,	Mishra, D.
	,,	7.	Hodge, E. H. V.
	,,	,,	De, P. N.
	,,	,,	Anbian, A. J.
515	,,	,,	Lemmon, R. D.
	,,	,,	Sandstrom, E. R
	,,	,,	Ray, G.
	,,	,,	Fyfe, D. A.
	July	5.	Husain, M. M.
520	,,	,,	Richey, J. A.
	,,	,,	Banerji, S. K.
	,,	,,	Mukhopadhyaya, P. K.
	,,	,,	Tyson, J. D.
	,,	,,	Lyne, H. W.
525	Aug.	2.	Calder, N. D.
	,,	,,	Oak, M. R.

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Aug. 2. Sohoni, V. V.
,, ,, Majumdar, D. N.
,, ,, Mukherjee, J. N.
,, ,, Khettry, B.
,, ,, James, J. L.
,, ,, De, B.
Nov. 1. Jameson, T. B.
,, ,, Collet, A. L.
,, ,, Modi, Jal R. K.
,, ,, Rau, S. S. R.
,, ,, Westcott, F.
,, ,, Barhut, T. K.
,, ,, Pugh, L. P. E.

Nov. 1. Wadhwana, M. M.
,, ,, Mills, J. P.
,, ,, Rao, W. L.
,, ,, Galstaun, S.
,, ,, Chokhani, S.
,, ,, Bagchi, P. C.
Dec. 6. Brahmachari, B. B.
,, ,, Aiyangar, S. K.
,, ,, Singh, B. R.
,, ,, Hora, G.
,, ,, Dutt, J. C.
,, ,, Guha, S.

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LIFE MEMBERS.

(*Chronological.*)

7- 4-70 B. Smith Lyman (70 N.).
2- 1-73 G. L. Houston (73 N.).
4- 2-85 H. P. Shastri (12 N.).
3- 3-86 R. D. Mehta (89 R.).
6- 6-88 A. P. Pennell (88 F.).
6- 3-89 T. H. D. La Touche (10 N.).
29 -8-89 J. D. Nimmo (89 N.).
6-11-89 D. C. Phillott (10 F.).
11- 1-93 Sir Edward D. Maclagan (94 R.).
1- 2-93 P. O. Bodding (14 N.).
31- 7-93 G. P. Tate (23 N.).
27- 9-94 W. Vost (94 F.).
3- 7-95 Sir Nicholas D. Beatson-Bell (95 N.).
19- 9-95 K. C. De. (26 R.).
6-11-99 Sir Rameshwar Singh (14 N.).
5-12-00 J. W. A. Grieve (00 F.).
6- 2-01 J. Ph. Vogel (25 F.).
28- 9-04 H. E. Stapleton (26 R.).
19- 7-06 R. B. Whitehead (26 N.).
4- 5-10 S. B. Dhavle (10 N.).
1-11-11 Kamaluddin Ahmad (24 N.).
5- 3-13 J. L. Simonsen (19 N.).
4- 3-14 J. Bacot (14 F.).
6- 2-18 E. N. Ghosh (25 R.).
6- 2-18 Johan van Manen (25 R.).
5-12-23 Lakshman Sen (24 N.).
7- 5-24 B. Bhattacharya (24 N.).
6- 8-24 L. M. Davies (24 N.).

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ASSOCIATE MEMBERS.

Date of Election.	
2-12-85	A. FÜHRER, *Professor of Sanskrit.* 5, Dorenbachstrasse, Binningen, Basel, Switzerland.
4-6-02	* A. H. FRANCKE, REV. c/o Universitets Bibliothek, Dorotheenstr. 81, Berlin, N.W. 7.
1-7-08	* DINESH CHANDRA SEN, RAI BAHADUR, B.A., D.LITT. 19, Visvakosh Lane, Bagbazar, Calcutta.
7-9-10	* L. K. ANANTHA KRISHNA IYER, RAO BAHADUR, B.A., L.T., F.R.A.I., *Lecturer in Anthropology, Calcutta University.* 2/3, Premchand Boral Street, Bowbazar, Calcutta.
7-12-10	* H. HOSTEN, REV., S.J. St. Joseph's College, Darjeeling.
5-3-15	* E. BRUNETTI. 27, Chowringhee, Calcutta.
3-10-19	* H. BRUCE HANNAH. Bengal Club, Calcutta.
1-2-22	PIERRE JOHANN, REV., S.J., B.LITT. (OXON.), *Professor of Philosophy, St. Xavier's College.* Calcutta.
1-2-22	ANANTAKRISHNA SASTRI, MAHAMAHOPADHYAYA. 57/1, Sreegopal Mullick Lane, Calcutta.
6-2-24	W. IVANOW. c/o Asiatic Society of Bengal, 1, Park Street, Calcutta.
6-2-24	KAMALAKRISHNA SMRITITIRTHA, MAHAMAHOPADHYAYA. Bhatpara, 24-Parganas.
1-2-26	DURGADAS MUKHERJEE, M.A., *Professor.* 35, Ballygunge Circular Road, Calcutta.

* Re-elected for a further period of five years on 5-3-1924 under Rule 2c.

ORDINARY FELLOWS.

Date of Election.	
2-2-10	Haraprasad Shastri, C.I.E., M.A., D.LITT.
2-2-10	T. H. D. La Touche, B.A., F.G.S.
2-2-10	D. C. Phillott, M.A., PH.D., M.R.A.S.
2-2-10	Sir Prafulla Chandra Ray, KT., C.I.E., M.A., D.SC.
2-2-10	Sir E. D. Ross, KT., C.I.E., PH.D.
7-2-12	Sir J. C. Bose, KT., C.S.I., C.I.E., M.A., D.SC., F.R.S.
7-2-12	P. J. Brühl, I.S.O., F.G.S., PH.D., F.C.S.
7-2-12	S. R. Christophers, C.I.E., O.B.E., I.M.S.
7-2-12	C. S. Middlemiss, C.I.E., B.A., F.G.S., F.R.S.
5-2-13	J. Ph. Vogel, PH.D., LITT.D.
5-2-13	S. W. Kemp, B.A., D.SC.
3-2-15	E. D. W. Greig, C.I.E., M.B., I.M.S.
3-2-15	G. H. Tipper, M.A., F.G.S., M.INST.M.M.
3-2-15	H. H. Haines, C.I.E., F.C.H., F.L.S.
2-2-16	Sir Richard Burn, KT., C.I.E., I.C.S.
2-2-16	L. L. Fermor, A.R.S.M., D.SC., F.G.S.
7-2-17	F. H. Gravely, D.SC.
6-2-18	J. L. Simonsen, D.SC., F.I.C.

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Date of Election.	
6-2-18	D. McCay, M.D., M.R.C.P., I.M.S.
6-2-18	A. A. Suhrawardy, M.A., PH.D., D.LITT., LL.D.
5-2-19	J. Coggin Brown, O.B.E., M.I.M.E., F.G.S.
5-2-19	W. A. K. Christie, B.SC., PH.D., M. INST. M.M.
5-2-19	D. R. Bhandarkar, M.A., PH.D.
5-2-19	R. B. Seymour Sewell, M.A., M.R.C.S., L.R.C.P., F.Z.S., I.M.S.
2-2-21	U. N. Brahmachari, M.A., PH.D., M.D.
2-2-21	B. L. Chaudhuri, B.A., D.SC., F.L.S., F.R.S.E.
1-2-22	Sir Edwin H. Pascoe, KT., M.A., D.SC., SC.D., F.G.S.
1-2-22	Ramaprasad Chanda, B.A.
7-2-23	S. Khuda Bukhsh, M.A., B.C.L.
7-2-23	G. N. Mukhopadhyaya, B.A., M.D.
4-2-25	M. Hidayat Hosain, PH.D.
4-2-25	Guy E. Pilgrim, D.SC., F.G.S.
4-2-25	C. V. Raman, M.A., D.SC., F.R.S.
1-2-26	P. O. Bodding, M.A.

SPECIAL HONORARY CENTENARY MEMBERS.

Date of Election.	
15-1-84	A. H. SAYCE, *Professor of Assyriology, Queen's College.* Oxford, England.
15-1-84	EMILE SENART. 18, Rue François Ier, Paris, France.

HONORARY FELLOWS.

Date of Election.	
5-2-96	CHARLES ROCKWELL LANMAN. 9, Farrar Street, Cambridge, Massachusetts, U.S.A.
6-12-99	SIR EDWIN RAY LANKESTER, K.C.B., M.A., LL.D., F.R.S. British Museum (Nat. Hist.), Cromwell Road, London, S.W.
2-3-04	SIR GEORGE ABRAHAM GRIERSON, K.C.I.E., O.M., PH.D., D.LITT., LL.D., F.B.A., I.C.S. (*Retired*). Rathfarnham, Camberley, Surrey, England.
6-9-11	ALFRED WILLIAM ALCOCK, C.I.E., M.B., LL.D., F.R.S. Heathlands, Belvedere, Kent, England.
6-9-11	KAMAKHYANATH TARKAVAGISA, MAHAMAHOPADHYAYA. 111/4, Shambazar Street, Calcutta.
5-8-15	SIR JOSEPH JOHN THOMSON, KT., O.M., M.A., SC.D., D.SC., LL.D., PH.D. Trinity College, Cambridge, England.
6-12-16	G. A. BOULENGER, F.R.S., LL.D. British Museum (Nat. Hist.), Cromwell Road, London, S.W.
2-5-17	HERBERT ALLEN GILES, *Professor.* 10, Selwyn Gardens, Cambridge, England.
5-2-20	SIR CHARLES ELIOT, K.C.M.G., C.B., M.A., LL.D., D.C.L. Beech Hill, Carleton, Skipton-in-Craven, England.
4-2-20	SYLVAIN LEVI. Collège de France, Paris.
4-2-20	SIR AUREL STEIN, K.C.I.E., PH.D., D.LITT., D.SC., D.O.L., F.B.A. Srinagar, Kashmir.
4-2-20	A FOUCHER, D.LITT. University of Paris.

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Date of Election.	
4-2-20	Sir Arthur Keith, M.D., F.R.C.S., LL.D., F.R.S. Royal College of Surgeons of England, Lincoln's Inn Fields, London, W.C. 2.
4-2-20	R. D. Oldham, F.R.S., F.G.S., F.R.G.S. 1, Broomfield Road, Kew, Surrey, England.
4-2-20	Sir David Prain, Kt., C.M.G., C.I.E., M.A., M.B., LL.D., F.R.S.E., F.L.S., F.R.S., F.Z.S., M.R.I.A. Royal Botanic Gardens, Kew, Surrey, England.
4-2-20	Sir Joseph Larmor, Kt., M.P., M.A., D.Sc., LL.D., D.C.L., F.R.S. F.R.A.S. St. John's College, Cambridge, England.
4-2-20	Sir James Frazer, Kt., D.C.L., LL.D., Litt.D. 1, Brick Court, Temple, London, E.C. 4.
4-2-20	J. Takakusu. Imperial University of Tokio, Japan.
2-3-21	F. W. Thomas, C.I.E., M.A., Hon. Ph.D., Librarian, India Office Library, Whitehall, London, S.W. 1.
7-6-22	W. H. Perkin, Ph.D., Sc.D., LL.D., F.R.S. 5, Charlbury Road, Oxford.
7-6-22	Sir Thomas Holland, K.C.S.I., K.C.I.E., D.Sc., F.R.S. Imperial College of Science and Technology, South Kensington, London, S.W. 7.
7-6-22	Sir Leonard Rogers, Kt., C.I.E., M.D., B.S., F.R.C.P., F.R.S., I.M.S. 24, Cavendish Square, London, 4.
1-11-22	Arthur Anthony Macdonell, M.A., Ph.D., D.O.L., *Boden Professor of Sanskrit, University of Oxford.* Oxford, England.
7-1-25	Sten Konow, Ethnographisk Museum. Christiania, Norway.
3-11-25	H. Beveridge, I.C.S. (Retired). Pitfold, Shottermill, Surrey, England.

CHANGES IN MEMBERSHIP.

List of Members who have been absent from India three years and upwards.*

**Rule* 40.—After the lapse of three years from the date of a member leaving India, if no intimation of his wishes shall, in the interval, have been received by the Society, his name shall be removed from the List of Members.

The following members will be removed from the next Member List of the Society under the operation of the above rule:—

1. E. P. Harrison. (1908.)
2. C. J. Hamilton. (1916.)

Loss of Members During 1926.

By Retirement.

Ordinary Members.

1. Tarak Nath Mukherjee. (1919.)
2. Kesari Singh Pancholy. (1925.)
3. J. A. Shorten. (1913.)
4. A. D. Stewart. (1922.)
5. R. M. A. Bhukhanwala. (1923.)
6. K. J. Purohit. (1924.)
7. G. C. Sturrock. (1921.)

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8. Sir Willoughby Carey, Kt. (1924.)
9. Hafiz Nazir Ahmed. (1924) (withdrawn.)
10. Suresh Chandra Ray. (1924.)
11. H. R. Nevill. (1901.)
12. P. Bosworth-Smith. (1920.)
13. Probhat Kumar Mukherjee. (1916.)
14. R. McCarrison. (1926.)
15. H. Suhrawardy. (1920) (withdrawn.)
16. B. C. Mazumdar. (1920.)
17. R. S. V. Aiyer. (1925.)

By Death.

Ordinary Members.

1. Jagadindranath Roy. (1903.)
2. Manmohan Ganguli. (1912.)
3. Rai Lalit Mohan Singha. (1912.)
4. Jatindranath Rai-Chaudhuri. (1895.)
5. D. B. Parasnis. (1904.)
6. Jamini Bhusan Roy. (1915.)
7. Amin-ul-Islam. (1919.)
8. S. N. Hoon. (1926.)
9. Abdul Wali. (1894.)
10. Flora Butcher. (1900.)
11. W. B. Kirwood. (1926.)

Honorary Fellows.

1. Edward Granville Browne. (1911.)

Under Rule 40.

1. J. J. Campos. (1918.)
2. G. S. Ranking. (1921.)
3. V. M. Galoostian. (1919.)

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MEDALLISTS.

ELLIOTT GOLD MEDAL AND CASH.

Recipients.

1893	Chandra Kanta Basu.
1895	Yati Bhusana Bhaduri.
1896	Jnan Saran Chakravarti.
1897	Sarasi Lal Sarkar.
1901	Sarasi Lal Sarkar.
1904	Sarasi Lal Sarkar. Surendra Nath Maitra.
1907	Akshoy Kumar Mazumdar.
1911	Jitendra Nath Rakshit. Jatindra Mohan Datta.
1913	Rasik Lal Datta. Saradakanta Ganguly. Nagendra Chandra Nag. Nilratan Dhar.
1918	Bibhutibhushan Dutta.
1919	Jnanendra Chandra Ghosh.
1922	Abani Bhusan Datta.
1923	Bhailal M. Amin.
1926	Bidhu Bhusan Ray.

BARCLAY MEMORIAL MEDAL.

Recipients.

1901	E. Ernest Green.
1903	Sir Ronald Ross, KT., K.C.B., C.I.E., K.C.M.G., M.R.C.S., F.R.C.S., D.P.H. LL.D., D.SC., M.D., F.R.S.
1905	D. D. Cunningham, C.I.E., F.R.S.
1907	A. W. Alcock, C.I.E., M.B., LL.D., F.R.S
1909	Sir David Prain, KT., C.I.E., C.M.G., M.A., M.B., LL.D., F.R.S.E., F.L.S., F.Z.S., M.R.I.A., F.R.S.
1911	Karl Diener.
1913	William Glen Liston, C.I.E., M.D., D.P.H.
1915	J. S. Gamble, C.I.E., M.A., F.R.S.
1917	H. H. Godwin-Austen, F.R.S., F.Z.S., F.R.G.S.
1919	N. Annandale, C.I.E., D.SC., C.M.Z.S., F.L.S., E.R.S., F.A.S.B.
1921	Sir Leonard Rogers, KT., C.I.E., M.D., B.S., F.R.C.P., F.R.C.S., F.R.S.

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1923 S. R. Christophers, C.I.E., O.B.E., M.B., I.M.S.
1925 J. Stephenson, C.I.E., B.SC., M.B., CH.B., F.R.C.S., F.R.S.E., I.M.S.

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PROCEEDINGS OF THE ORDINARY MONTHLY MEETINGS, 1926.

JANUARY, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 4th, at 5-30 P.M.

PRESENT.

SIR RAJENDRA NATH MOOKERJEE, K.C.I.E., K.C.V.O., President, in the Chair.

Members :

Abdul Wali, Maulavi
Acharya, Mr. P.
Bhattacharya, Mr. B.
Bose, Mr. M. M.
Chaudhuri, Dr. B. L.
Chaudhuri, Mr. J.
Chopra, Dr. B. N.
Christie, Dr. W. A. K.
Hobbs, Mr. H.
Kimura, Prof. R.
Mahalanobis, Prof. P. C.
Manen, Mr. Johan van
Mirza, Mr. M. B.
Mitter, Mr. B. L.
Mitter, Mr. B. P. D.
Ottens, Mr. N.
Raman, Dr. C. V.
Sewell, Major R. B. S.
Stapleton, Mr. H. E.
Stocks, Mrs. C. de Beauvoir
Tipper, Mr. G. H.
Walton, Mr. E. B.

and another.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of twenty-two presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for as Ordinary Members :

(1) *Lamba, Gurdial Singh*, B.Sc. (Hons.), Provincial Forest Service (Dehra Dun); Extra-Assistant Conservator of Forests, Chanda, (Central Provinces).
Proposer : S. L. Hora.
Seconder : B. N. Chopra.

(2) *Gaffar, Abdul*, Khan Saheb, Police Magistrate, Alipore; 23, Gardner Lane, Calcutta.
Proposer : S. Khuda Bukhsh.
Seconder : Johan van Manen.

(3) *Nomani, Hamid H.*, Maulavi, M.A., Deputy Collector, Rajshahi.
Proposer : M. Hidayat Hosain.
Seconder : M. Mahfuzul Huq.

(4) *Hubert, Otto*, Chancellor to the German Consulate General, 2, Store Road, Ballygunge, Calcutta.
Proposer : W. von Pochhammer.
Seconder : G. H. Tipper.

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(5) *Younus, Mohammad,* Asst. Director-General of Police, H.E.H. The Nizam's Government, Saifabad, Hyderabad, (Deccan).
Proposer: M. Hidayat Hosain.
Seconder: G. H. Tipper.

(6) *Murray, Howard,* C.I.E., Lt.-Col., Indian Army, Deputy Financial Advisor, Army Headquarters, Cecil Hotel, Simla.
Proposer: W. A. K. Christie.
Seconder: G. H. Tipper.

(7) *Stapleton, Grace,* (Miss), M.D., B.S. (London), Superintendent, Dufferin Hospital, Calcutta.
Proposer: H. E. Stapleton.
Seconder: R. B. S. Sewell.

(8) *Fleming, Andrew,* General Manager for the East, Minimax, Ld., 81-8, Bentinck Street; 59, Park Street, Calcutta.
Proposer: W. A. K. Christie.
Seconder: Haraprasad Shastri.

(9) *Habib, Mohammad,* B.A. (Oxon.), M.R.A.S., Bar.-at-Law, Professor of History, Muslim University, Aligarh.
Proposer: Mohammad Sharif.
Seconder: S. L. Hora.

(10) *Becker, John Neill,* Becker Gray & Co. (Calcutta), Ld., Hongkong House, Calcutta.
Proposer: Haraprasad Shastri.
Seconder: M. Hidayat Hosain.

(11) *Chatterji, Kshitish Chandra,* M.A., Lecturer in Comparative Philology, Calcutta University; 99, Shambazar Street, Calcutta.
Proposer: S. K. Chatterji.
Seconder: Haraprasad Shastri.

(12) *Tomb, John Walker,* O.B.E., M.A., M.D., D.P.H., Chief Medical Officer, Asansol Mines' Board of Health, Asansol.
Proposer: U. N. Brahmachari.
Seconder: R. N. Chopra.

(13) *Shortt, H. E.,* Major, I.M.S., Director, Kala-azar Commission, Golaghat, Assam.
Proposer: U. N. Brahmachari.
Seconder: S. R. Christophers.

(14) *Hodgson, E. C.,* Lt.-Col., I.M.S., Director, Pasteur Institute, Shillong.
Proposer: U. N. Brahmachari.
Seconder: R. Knowles.

(15) *Sinton, J. A.,* O.B.E., V.C., Major, I.M.S., Officer-in-Charge, Malaria Bureau, Central Research Institute, Kasauli.
Proposer: U. N. Brahmachari.
Seconder: S. R. Christophers.

(16) *McCarrison, R.,* C.I.E., Lt.-Col., I.M.S., Officer-in-Charge, Deficiency Diseases Enquiry, Pasteur Institute, Coonoor, S.I.
Proposer: U. N. Brahmachari.
Seconder: S. R. Christophers.

(17) *Cunningham, J.,* C.I.E., O.B.E., Lt.-Col., I.M.S., Director, Pasteur Institute, Kasauli.
Proposer: U. N. Brahmachari.
Seconder: S. R. Christophers.

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(18) *Sur, S. N.*, M.B., D.P.H., D.T.M., Asst. Director of Public Health, Writers' Buildings, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: R. N. Chopra.

(19) *Brahmachari, Indu Bhusan*, University Lecturer, 110/2, Dhakuria Road, Kalighat, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: R. N. Chopra.

(20) *Bathgate, Richard G. Muir*, M.I.M.E., F.G.S., General Manager, East India Coal Co., Ld., Jealgora P.O., Manbhum.
Proposer: Sir R. N. Mookerjee.
Seconder: Johan van Manen.

(21) *Bathgate, Jean Bertram (Mrs.)*, Jealgora P.O., Manbhum.
Proposer: Sir R. N. Mookerjee.
Seconder: Johan van Manen.

The General Secretary reported the death of the following relations of the Society:

Sir Paul Vinogradoff (An Honorary Fellow, 1915).
Sir Alfred Woodley Croft (President, 1892-93).

The General Secretary reported the following loss of membership during the previous month by resignation of:—

E. J. Morris (An Ordinary Member, 1924).
A. B. Fry (An Ordinary Member, 1923).
E. Marsden (An Ordinary Member, 1905).
Anandji Haridas (An Ordinary Member, 1924).
Jyotis Chandra Ghatak (An Ordinary Member, 1921).
G. de P. Cotter (An Ordinary Member, 1907).

The General Secretary reported that the Hon'ble Mr. S. R. Das, whose resignation was announced in the previous meeting, had withdrawn his resignation.

The General Secretary reported that the election of
Himmat Singh Mehta (Elected on 1-9-1925),
Mohan Singh (Elected on 26-10-1925),
had become null and void, under Rule 9.

The following papers were read:

1. P. C. Mahalanobis.—*Analysis of Race-mixture in Bengal.*

2. H. P. Shastri.—*Bhadra Yana.*

3. Johan van Manen.—*The Pali Text Society's Pali-English Dictionary.*

The following exhibits were shown by R. B. S. Sewell:—

1. A Natural Pearl in situ in an Oyster.
2. An Example of a sacred or left-handed Chank-shell.

The following communications were made:—

1. Mrs. C. de Beauvoir Stocks.—Researches amongst the Lepchas of Sikkim.
2. C. V. Raman.—The total Reflexion of Light.

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The President announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

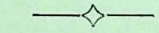
The President announced that the second General Lecture of the season had been fixed for Thursday, January 7th, at 6-15 P.M.

Speaker: G. T. Labey.
Subject: Life aboard an East India Man towards the latter end of the 17th century.

The President invited the members present to communicate to the Society's Office the names and addresses of non-members to whom they wished invitations to be issued.

The President announced that the room on the ground floor set apart as a retiring room for Members, was ready for use.

The President announced that H.E. the Governor of Bengal, Patron of the Society, had consented to be present at the Annual Meeting to be held on Monday, February 1st, at 5-30 P.M., and invited the Members to communicate to the General Secretary the names of guests to be invited to the meeting.



FEBRUARY, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 1st, immediately after the termination of the Annual Meeting.

PRESENT.

G. H. TIPPER, ESQ., M.A., F.G.S., M.INST.M.M., F.A.S.B., President, in the Chair.

Members:

Acton, Major H. W.
Aiyer, Mr. R. S. V.
Barwell, Lt.-Col. N. F.
Brühl, Dr. P. J.
Carritt, Mr. S. E.
Chopra, Major R. N.
Christie, Dr. W. A. K.
Das-Gupta, Mr. H. C.
Insch, Mr. Jas.
Knowles, Major R.
Huq, Mr. M. Mahfuzul
Manen, Mr. Johan van
Mirza, Mr. M. B.
Mitter, Mr. B. L.
Raman, Dr. C. V.
Sanaullah, Mr. M.
Sewell, Major R. B. S.
Shastri, MM. H.P.
Stapleton, Mr. H. E.
Walton, Mr. E. B.
and others.

The minutes of the last meeting were read and confirmed.

The following candidates were balloted for as Ordinary Members:—

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(22) *Edwards, C. A. Hendry.* Dy. Chief Engineer, E. B. Ry.; 8, Belvedere Park, Alipore, Calcutta.
Proposer: T. H. Bishop.
Seconder: Johan van Manen.

(23) *Ruthnaswamy, The Hon'ble Mr. M.*, President, Legislative Council, Madras.
Proposer: Sir R. N. Mookerjee.
Seconder: Johan van Manen.

(24) *Meston, Lord*, K.C.I.E., LL.D., Hurst, Cookenham Dene, Berkshire, England.
Proposer: Sir R. N. Mookerjee.
Seconder: P. S. Jackson.

(25) *Rao, T. Ramachandra*, Rao Sahib, Officiating Government Entomologist, P.O. Lawley Road, Coimbatore.
Proposer: S. L. Hora.
Seconder: R. B. S. Sewell.

(26) *Husain, Mohammad Afzal*, M.Sc., M.A., Officiating Imperial Entomologist, Agricultural Research Institute, Pusa (Behar).
Proposer: S. L. Hora.
Seconder: R. B. S. Sewell.

(27) *Mathur, L. P.*, Professor of Zoology, St. Thomas' College, Agra.
Proposer: S. L. Hora.
Seconder: R. B. S. Sewell.

(28) *Gulati, Amar Nath*, M.Sc., c/o. The Imperial Institute of Veterinary Research, Muktesar, U.P.
Proposer: S. L. Hora.
Seconder: B. N. Chopra.

(29) *Singh, Bawa Balwant*, M.Sc., F.R.M.S., University Demonstrator, Zoological Department, Punjab University, Lahore.
Proposer: S. L. Hora.
Seconder: B. N. Chopra.

(30) *Setna, S. B.*, M.Sc., Lecturer, Royal Institute of Science, Bombay.
Proposer: S. L. Hora.
Seconder: B. N. Chopra.

(31) *Lele, S. H.*, M.A., B.Sc., Lecturer in Zoology, Royal Institute of Science, Bombay.
Proposer: S. L. Hora.
Seconder: R. B. S. Sewell.

(32) *Asana, Jehangir Jamasji*, M.A. (Bombay), B.A. (Cantab.), Lecturer in Zoology, Gujarat College, Ahmedabad.
Proposer: S. L. Hora.
Seconder: S. Srinivasa Rao.

(33) *Viswanath, B.*, F.I.C., Fellow of the Chemical Society (London), Fellow of the Chemical Society (India), Officiating Government Agricultural Chemist, P.O. Lawley Road, Coimbatore.
Proposer: S. L. Hora.
Seconder: R. B. S. Sewell.

(34) *Bose, Sahay Ram*, D.Sc., F.R.S.E., F.L.S., Professor of Botany, Carmichael Medical College, Calcutta.
Proposer: S. L. Hora.
Seconder: H. C. Das-Gupta.

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(35) *Goswami, Mahendra Nath*, M.A. (Cal.), D.Sc. (Tolouse), Asst. Professor of Applied Chemistry, University College of Science, 92, Upper Circular Road, Calcutta.
Proposer: S. L. Hora.
Seconder: H. C. Das-Gupta.

(36) *Narke, Ganesh Govind*, Geologist and Mining Engineer, Professor of Geology and Chemistry, College of Engineering, Poona.
Proposer: M. Vinayak Rao.
Seconder: S. L. Hora.

(37) *Chaudhuri, Haraprasad*, Reader in Botany, Punjab University, Lahore.
Proposer: S. L. Hora.
Seconder: H. C. Das-Gupta.

(38) *Kashyap, Shiv Ram*, Professor of Botany, Government College, Lahore.
Proposer: S. L. Hora.
Seconder: H. C. Das-Gupta.

(39) *Mehra, H. R.*, M.Sc. (Punjab), Ph.D. (Cantab.), Reader in Zoology, University of Allahabad, 12, Bank Road, Allahabad.
Proposer: S. L. Hora.
Seconder: H. C. Das-Gupta.

(40) *Parija, Pran Krishna*, B.Sc. (Cal.), M.A. (Cantab.), Fellow of the Royal Society of Arts, Fellow of the Senate of the Patna University, I.E.S., Professor of Botany, Ravenshaw College, Cuttack.
Proposer: H. C. Das-Gupta.
Seconder: S. L. Hora.

(41) *Batia, B. L.*, M.Sc., F.Z.S., F.R.M.S., Lecturer in Zoology, Government College, Lahore.
Proposer: S. L. Hora.
Seconder: R. B. S. Sewell.

(42) *Bahl, Har Kishen Lal*, Assistant, Imperial Bank of India, Bombay.
Proposer: S. L. Hora.
Seconder: A. R. Bery.

(43) *Ghuznavi, A. K.*, Zemindar of Dilduar, late Minister, Government of Bengal, M.L.C., Calcutta Club; and North House, P. O. Dilduar, Mymensingh.
Proposer: Sir R. N. Mookerjee.
Seconder: Sir W. E. Greaves.

(44) *Khaitan, D. P.*, M.L.C., Attorney-at-Law, Solicitor and Merchant, 137, Canning Street, Calcutta.
Proposer: Sir R. N. Mookerjee.
Seconder: Sir W. E. Greaves.

(45) *Sen, Hridayranjan*, M.A., B.L., Bengal Civil Service (Executive Branch), Mymensingh.
Proposer: A. F. M. Abdul Ali.
Seconder: Johan van Manen.

(46) *Hingston, H.*, M.D., Major, I.M.S., Officiating Professor of Clinical Medicine, Medical College, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: S. L. Hora.

(47) *Harris, H. G.*, Director, Messrs. Martin and Harris, Ld., 8, Waterloo Street, Calcutta.

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Proposer: U. N. Brahmachari.
Seconder: R. N. Chopra.

(48) *Ghuznavi, A. H.*, Merchant and Zemindar, 18, Canal Street, Entally, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: S. L. Hora.

(49) *Khambata, R. B.*, M.R.C.S., L.R.C.P., D.P.H., Director of Bengal Public Health Laboratory and Professor of Laboratory Practice, School of Tropical Medicine and Hygiene, Central Avenue, Calcutta; 2-B, Camac Street, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: S. L. Hora.

(50) *Nair, J. K.*, Chemist and Metallurgist, E.I. Ry., Jamalpur.
Proposer: U. N. Brahmachari.
Seconder: S. L. Hora.

(51) *Chand, Lal*, Printer, 76, Lower Circular Road, Calcutta.
Proposer: S. L. Hora.
Seconder: A. R. Bery.

(52) *Hoon, S. N.*, District Traffic Superintendent, E.B. Ry., Calcutta.
Proposer: S. L. Hora.
Seconder: B. N. Chopra.

(53) *Baptist, A. E.*, M.B.E., Major, I.M.D., Asst. Director, School of Tropical Medicine and Hygiene, Central Avenue, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: R. Knowles.

The General Secretary reported, in conformity with Rule 48A, that the Council, since the last Ordinary Monthly Meeting, had passed certain modifications of the Regulations regarding the Election of Fellows as follows:—

Regulation 1. Read "*ex-officio* Secretary and Convener," instead of "*ex-officio* Secretary." Delete the final sentence "The General Secretary shall ....." in Regulation 13.

Change the numbering of Regulation (2) to (3).
Change the numbering of Regulation (3) to (5).
Change the numbering of Regulation (4) to (2).

Regulation 4. Read "June" instead of "the second week," and delete the words "by the General Secretary" from the first sentence.

Change the numbering of Regulation (5) to (4).

Regulation 8. Delete the words "by the General Secretary" from the first sentence.

Regulation 13. Delete the words "by the General Secretary" from the first sentence.

Regulation 18(*b*). Read "Each member shall deliver his voting paper unsigned together with a certificate that he has recorded his vote."

Regulation 18(*c*). Read "The scrutineers shall examine the voting papers" instead of "The scrutineers after counting the voting papers..... to proceed to examine the voting papers."

Regulation 18(*d*). Delete.

Change the numbering of Regulation 18(*c*) to 18(*d*).

The President announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

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The President announced that a meeting of the Medical Section would be held during the month.

—◇—

MARCH, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 1st, at 5-30 P.M.

PRESENT.

G. H. TIPPER, ESQ., M.A., F.G.S., M.INST.M M., F.A S.B., President, in the Chair.

Members:

Abdul Wali, Maulavi
Barwell, Lt.-Col. N.F.
Biswas, Mr. Kalipada
Chatterji, Dr. S. K.
Chaudhuri, Mr. J.
Dutt, Mr. K. C.
Fleming, Mr. Andrew
Hora, Dr. S. L.
Hosain, Dr. M. Hidayat
Jain, Mr. Chhotelal
Manen, Mr. Johan van
Miles, Mr. W. H.
Mirza, Mr. M. B.
Mitter, Mr. B. P. D.
Mukherjee, Mr. B. L.
Mukherjee, Dr. G. N.
Sewell, Major R. B. S.
Shastri, MM. H. P.
Stapleton, Mr. H. E.

Visitor:

Nath, Pundit Shunker

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt during the past two months of 37 presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for election as Ordinary Members:

(54) *Banerjee, Woomesh Chandra*, Colliery Proprietor and Merchant, 7, Swallow Lane, Calcutta.
Proposer: M. Hidayat Hosain.
Seconder: M. Mahfuzul Huq.

(55) *McKay, John Wallace*, Delegate, Chilean Nitrate Committee (Indian Delegation), 7, Hare Street, Calcutta.
Proposer: James Insch.
Seconder: Johan van Manen.

(56) *Mookerjee, Satish Chandra*, Barrister-at-Law, 7, Ballygunge Circular Road, Calcutta.
Proposer: R. B. S. Sewell.
Seconder: Johan van Manen.

(57) *Snaith, John Frank*, Managing Director, Messrs. Hamilton & Co., 6, Old Court House Street, Calcutta.
Proposer: N. F. Barwell.
Seconder: Johan van Manen.

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(58) *Gupta, Dhirendra Nath*, Major, L.M.S. (Bombay), Bihar and Orissa Medical Service, Medical Sadar Asst. Surgeon, Sadar Hospital, Arrah.
Proposer: G. H. Tipper.
Seconder: H. P. Shastri.

(59) *Mukherjee, Aditya Nath*, Principal, Sanskrit College, 10-B, Mohun Lal Street, Shambazar, Calcutta.
Proposer: H. P. Shastri.
Seconder: G. H. Tipper.

(60) *Datta, Hirendra Nath*, M.A., B.L., Solicitor, High Court; 139, Cornwallis Street, Calcutta.
Proposer: H. P. Shastri.
Seconder: Johan van Manen.

(61) *Basu, Narendra Kumar*, Advocate, Calcutta High Court; 12, Pataldanga Street, Calcutta.
Proposer: H. P. Shastri.
Seconder: G. H. Tipper.

(62) *Kramrisch, Stella*, (*Miss*), Ph.D., Lecturer in Indian History of Arts; 35, Ballygunge Circular Road, Calcutta.
Proposer: P. J. Brühl.
Seconder: Johan van Manen.

(63) *Bagnall, John Frederick*, Consulting Engineer, Messrs. McNeill & Co., Clive Ghat Street, Calcutta.
Proposer: H. Hobbs.
Seconder: G. H. Tipper.

The General Secretary reported the deaths of :—

Maharaja Jagadindra Nath Ray Bahadur (A Life Member, 1903-1909).

Man Mohan Ganguly (An Ordinary Member, 1912).
Edward Granville Browne (An Honorary Fellow, 1911).
Lalit Mohan Singh (An Ordinary Member, 1912).

The General Secretary reported the following loss of membership during the previous month by resignation of :—

Taraknath Mukherjee (An Ordinary Member, 1919).
Kesari Singh Pancholy (An Ordinary Member, 1925).
J. A. Shorten (An Ordinary Member, 1913).

The General Secretary reported that the election of

Malik Ram Bhasin (elected on 7-12-25),

had become null and void, under Rule 9.

The General Secretary reported receipt of news of the death of the following relations of the Society :—

Lord Carmichael, First Baron of Skirling, a former President of the Society.

Robert Sewell, a former Ordinary Member of the Society.

Mr. B. L. Mitter read an obituary notice of Maharaja Jagadindra Nath Roy Bahadur. (*See page* clxiv.)

MM. Haraprasad Shastri read an obituary notice of Manomohan Ganguli. (*See page* clxiv.)

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Dr. M. Hidayat Hosain read an obituary notice of Edward Granville Browne. (*See page* clxv.)

MM. Haraprasad Shastri read an obituary notice of Sir Alfred Woodley Croft. (*See page* clxxi.)

Major R. B. S. Sewell read an obituary notice of Lord Carmichael. (*See page* clxxii.)

Major R. B. S. Sewell read an obituary notice of Robert Sewell. (*See page* clxxiv.)

The following papers were read :—

1. C. K. Krishnaswamy Pillai *and* V. S. Swaminathan.—*A note on the Rockslides of the Western Ghat Section, South India.*

2. H. L. Chhibber.—*The Extinct Iron Industry of the Neighbourhood of Mount Popa, Upper Burma, with Notes on the microscopic Study of the Slags.*

3. H. L. Chhibber.—*The Origin and mineral Constitution of the late tertiary fossil Wood of Burma.*

4. P. O. Bodding.—*A Plea for a standardized System of Writing the Munda or Kolarian Languages.*

5. P. O. Bodding.—*A Note on the 'Wild People' of the Santals.*

The President announced the results of the ballots for the election of Ordinary Members and declared all the candidates duly elected.

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APRIL, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 5th, at 5-30 P.M.

Present.

Mahamahopadhyaya Haraprasad Shastri, C.I.E., M.A., F.A.S.B., in the Chair.

Members :

Abdul Wali, Maulavi
Chaudhuri, Dr. B. L.
Bery, Mr. A. R.
Chopra, Mr. B. N.
Hora, Dr. S. L.
Manen, Mr. Johan van
Ray, Kumar Sarat Kumar
Sewell, Major R. B. S.

Visitors :

Jennings, Mr. B. H. S.
McVie, Mr. Allan
Wardiah, Mr. G. G.

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The minutes of the last meeting were read and confirmed.

The General Secretary reported the receipt of twenty-three presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for as Ordinary Members :

(64) *Sondhi, Gautam*. Lecturer in Zoology, 35, Ballygunge Circular Road, Calcutta.
Proposer : R. B. S. Sewell.
Seconder : S. L. Hora.

(65) *Chokhany, Ram Dev*, Rai Saheb, Member, Calcutta Improvement Trust, 135, Harrison Road, Calcutta.
Proposer : H. Hobbs.
Seconder : G. H. Tipper.

(66) *Gupta, Surendra Nath*, Insurance Broker, 101/1, Clive Street, Calcutta.
Proposer : G. H. Tipper.
Seconder : S. L. Hora.

(67) *Bose, Girindra Shekhar*, D.Sc., M.B., Medical Practitioner and University Lecturer, 14, Parsi Bagan, Calcutta.
Proposer : B. L. Mukherjee.
Seconder : G. H. Tipper.

(68) *Senior-White, Ronald*, F.E.S., F.R.S.T.M. and H., Malariologist to the Bengal Nagpur Railway, c/o. the Chief Medical Officer, B. N. Ry., Kidderpore, Calcutta.
Proposer : R. B. S. Sewell.
Seconder : S. L. Hora.

(69) *Ghose, Bimal Chandra*, Barrister-at-Law, 27/1, Haris Mukherjee Road, Calcutta.
Proposer : B. L. Mukherjee.
Seconder : R. B. S. Sewell.

(70) *Parker, Richard Henry*, I.C.S., Late Scholar of St. John's College, Oxford, Under-Secretary to the A.G.G., Rajputana, Mount Abu, Rajputana.
Proposer : N. F. Barwell.
Seconder : Johan van Manen.

(71) *Bhatia, M. L.*, M.Sc., Lecturer in Zoology, The University, Lucknow.
Proposer : B. N. Chopra.
Seconder : S. L. Hora.

(72) *Mitter, Khagendra Nath*, M.A., Professor, Presidency College; 35, Beadon Row, Calcutta.
Proposer : H. E. Stapleton.
Seconder : H. C. Das-Gupta.

(73) *Jones, Thornton*, Solicitor, Calcutta Club, Lower Circular Road, Calcutta
Proposer : N. F. Barwell.
Seconder : Johan van Manen.

(74) *Mukherjee, Kshetrakalo*, 41, Haldarpara Road, Kalighat, Calcutta.
Proposer : B. L. Mukherjee.
Seconder : S. L. Hora.

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(75) *Mitter, Kumar Krishna,* 14, Ahiritollah Street, Calcutta.
Proposer: J. C. Mitra.
Seconder: H. P. Shastri.

The General Secretary reported the loss of membership during the previous month by resignation of:

A. D. Stewart (An Ordinary Member, 1922).

The General Secretary reported, in conformity with Rule 48A, that the Council, since the last Ordinary Monthly Meeting, had revised No. 22 of the Library Regulations, to be read as follows:

"A Meeting of the Library Committee, which shall include the Sectional Secretaries as *ex-officio* Members, shall be held at least once a quarter. Books shall generally be purchased with the approval of the Library Committee obtained in meeting. The Library Secretary is, however, empowered to spend on his own responsibility up to Rs. 150 per mensem on books recommended which he considers shall be obtained at once."

The General Secretary reported the composition of the various standing Committees of the Society for the ensuing year.

Publication Committee ..	President. General Secretary. Treasurer. Sectional Secretaries.	*Ex-officio.*
Library Committee ..	President. General Secretary. Treasurer. Sectional Secretaries. Sir C. C. Ghose. Percy Brown.	*Ex-officio.*
Finance Committee ..	President. General Secretary. Treasurer. Sir R. N. Mookerjee. H. P. Shastri. P. C. Mahalanobis. J. C. Mitra. A. R. Bery.	*Ex-officio.*

No other Committees to be constituted for the year.

The General Secretary reported that during the previous month the number of Ordinary Members of the Society had once more risen above 500, a total only surpassed before during the years 1910–12.

The General Secretary reported that the Council had nominated MM. Haraprasad Shastri to serve on the Selection Committee, Kamala Lectureship, Calcutta University, 1926.

The Chairman drew attention to the working of the sound-amplifier apparatus exhibited by the Standard Telephone and Cable Co., Ld., and requested authors of papers to use the apparatus when reading their communications.

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The following papers were read :

1. Mrs. C. de Beauvoir Stocks.—*The Folk-lore and Customs of the Lap-Chas of Sikkim.*

2. S. L. Hora.—*A Note on the Distribution of* Balwantia Soleniformis.

3. J. H. Hutton.—*Diaries of two Tours in the unadministered Area, east of the Naga Hills.*

4. D. N. Majumdar.—*Marriage and Betrothal amongst the Hos of Kolhan.*

5. W. Ivanow.—*Rustic Poetry in the Dialect of Khorasan.*

6. H. C. Das-Gupta.—*A few Types of sedentary Games prevalent in the Punjab.*

The General Secretary reported receipt of copies of a series of letters relating to the history of the early years of the Society, presented by Mr. A. F. M. Abdul Ali, which were exhibited at the meeting.

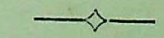
The Chairman called upon the representative of the Standard Telephone and Cable Co., Ld., to demonstrate in detail, and explain, the working system of their sound-amplifier. A number of Members present addressed the meeting in turn in various languages with the help of the apparatus.

The Chairman expressed the thanks of the meeting to the Standard Telephone and Cable Company and their representative for their useful demonstration.

The Chairman announced the results of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that a meeting of the Medical Section would be held on the 12th, at 6-15 P.M.

The Chairman made a reference to the President's impending absence from India under medical orders, and on his proposal the meeting resolved by acclamation to give expression to its sympathy with the President, and its regret at his enforced absence caused by ill-health, and to convey to him its best wishes for a speedy and complete recovery and subsequent return to the Chair.



MAY, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 3rd, at 5-30 P.M.

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PRESIDENT.

RAI UPENDRA NATH BRAHMACHARI, BAHADUR, M.A., M.D., Ph.D., F.A.S.B., Acting President, in the Chair.

Members :

Agharkar, Dr. S. P.
Barwell, Lt.-Col. N.F.
Bose, Mr. M. M.
Chaudhuri, Dr. B. L.
Chopra, Dr. B. N.
Cleghorn, Miss M. L.
Das-Gupta, Mr. H. C.
Deb, Kumar H. K.
Fleming, Mr. Andrew
Ghose, Mr. Justice C. C., Kt.
Ghose, Mr. T. P.
Hora, Dr. S. L.
Insch, Mr. Jas.
Koester, Dr. Hans
Manen, Mr. Johan van
Mitter, Mr. B. P. D.
Mookerjee, Mr. S. C.
Ottens, Mr. N.
Raman, Dr. C. V.
Ray, Kumar Sarat Kumar
Sen, Mr. B. C.
Sewell, Major R. B. S.
Senior-White, Mr. R.
Shastri, MM. H. P.
Rao, Mr. H. Srinivasa

Visitors :

Cleghorn, Miss O.
Shastri-Chaudhuri, Mr. M. K.
Sinha, Mr. Sudhindra C.
Sinha, Mr. Suhrid C.
Shyam Shankar, Mr.
and others.

The minutes of the last meeting were read and confirmed.

The General Secretary announced receipt of twenty-four presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for as Ordinary Members :

(76) *Lal, L. Sohan*, B.A., B.T., Lecturer in Geography and History, Central Training College, Lahore.
Proposer : R. H. Whitehouse.
Seconder : U. N. Brahmachari.

(77) *Rai, Bhagwant Rai*, Sardar Munshi, M.P.H.S., Retired District Judge ; Proprietor, "Rais-i-Hind," Bhagwant Ashram, Patiala.
Proposer : U. N. Brahmachari.
Seconder : P. C. Mahalanobis.

(78) *Bhaskaraiya, C.*, M.A., Indian Audit and Accounts Service, Audit Officer, Treasury Buildings, Calcutta.
Proposer : H. Srinivasa Rao.
Seconder : S. L. Hora.

(79) *Kirwan, Ernest William O'Gorman*, Major, I.M.S., Officiating Professor of Ophthalmology, 6, Little Russell Street, Calcutta.
Proposer : H. W. Acton.
Seconder : R. Knowles.

The General Secretary reported the death of :

Jatindra Nath Rai-Chaudhuri (An Ordinary Member, 1895).

The General Secretary reported the loss of membership during the previous month by resignation of :

R. M. A. Bhukhanwala (An Ordinary Member, 1923).

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The General Secretary reported the composition of a Lease Committee of the Society for the year to be as follows :

President.
Treasurer.
General Secretary.
Sir C. C. Ghose.
Mr. A. R. Bery.

The General Secretary reported the receipt of a gift to the Society from the Acting President, Dr. U. N. Brahmachari, of Government 3½% securities to the face value of Rs. 3,000, for the institution of a periodical award of a medal to be named after Sir William Jones.

The Gift had been accepted by the Council, who had conveyed its thanks to the donor. A Committee to draft rules and work out details for the award had been constituted consisting of Sir Ewart Greaves, Sir C. C. Ghose, Major R. B. S. Sewell, Major H. W. Action and the General Secretary.

The following papers were read :

1. H. K. Deb.—*When Kurus fought Pandavas.*

2. H. K. Deb.—*The five-yearly Yuga and the Saptarshi Cycle.*

3. R. B. S. Sewell.—*Maritime Meteorology in Indian Seas.*

4. S. L. Hora.—*Note on a hermaphrodite Loach.*

The following exhibit was shown and commented upon :

R. B. S. Sewell.—Specimens taken from the raised Coral Reef of Southern India.

The Chairman announced the results of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The Chairman announced that a meeting of the Medical Section would be held on the 10th, at 5-45 P.M.

—◇—

JUNE, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 7th, at 5-30 P.M.

PRESENT.

Mahamahopadhyaya Haraprasad Shastri, C.I.E., M.A., F.A.S.B., in the Chair.

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Members :

Abdul Wali, Maulavi
Agharkar, Dr. S. P.
Barwell, Lt.-Col. N. F.
Becker, Mr. J. N.
Brahmachari, Dr. U. N.
Das-Gupta, Mr. H. C.
Ghose, Mr. Justice C. C., Kt.
Ghose, Mr. T. P.
Hosain, Dr. M. Hidayat
Insch, Mr. Jas.
Majumdar, Mr. N. G.
Manen, Mr. Johan van
Mookerjee, Mr. S. C.
Moreno, Dr. H. W. B.
Mukherjee, Mr. B. L.
Ray, Kumar Sarat Kumar
Sewell, Major R. B. S.

Visitors :

Griffiths, Mr. Chas. and others.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of twenty presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for as Ordinary Members :

(80) *Panee, Wajid Ali Khan,* Zemindar, P.O. Karotia, Dist. Mymensingh.
Proposer : A. F. M. Abdul Ali.
Seconder : N. Ottens.

(81) *Outhwaite, H. A.*, Statistical Officer, E.B. Ry., 26, Chowringhee, Calcutta.
Proposer : U. N. Brahmachari.
Seconder : H. P. Shastri.

(82) *Mishra, Deomitra,* Public Prosecutor, Kotah, Rajputana.
Proposer : H. P. Shastri.
Seconder : M. Hidayat Hosain.

(83) *Hodge, E. H. Vere,* Major, I.M.S., M.B., B.C. (Cantab), M.R.C.S., L.R.C.P., Professor of Clinical Medicine, Medical College, Calcutta ; 9-4, Middleton Row, Calcutta.
Proposer : U. N. Brahmachari.
Seconder : N. Ottens.

(84) *Maitra, Dwijendra Nath,* M.B., Medical Practitioner, 70, Amherst Street, Calcutta.
Proposer : B. L. Chaudhuri.
Seconder : Gopal Das Chaudhuri.

(85) *Dey, Phanindranath,* M.A., B.L., Vakil High Court; 4, Patuatola Lane, Calcutta.
Proposer : B. L. Chaudhuri.
Seconder : Taraprasanna Gupta.

(86) *Anbian, A. John,* B.A., M.P.E.S., Manager and Correspondent, Principal, Cambridge Institution, Nagore.
Proposer : N. Ottens.
Seconder : H. P. Shastri.

(87) *Lemmon, Richard Dennis,* Merchant, 8, Waterloo Street, Calcutta.
Proposer : H. G. Harris.
Seconder : U. N. Brahmachari.

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(88) *Acharjea, Karuna Pada*, Bidyabhusan, P.O. Raghunathpur, Vill. Handuarah, Dt. Manbhum.
Proposer: H. P. Shastri.
Seconder: M. Hidayat Hosain.

(89) *Sarkar, Akshay Kumar*, L.M.S. (Calcutta), Teacher of Medical Jurisprudence and Hygiene, Dacca Medical School, Dacca.
Proposer: P. P. Ganguli.
Seconder: R. Knowles.

(90) *Sandstrom, Earl Russell*, Banking, International Banking Corporation, 4, Clive Street, Calcutta.
Proposer: N. Ottens.
Seconder: H. P. Shastri.

(91) *Ray, Gyanendranath*, I.C.S., Additional Judge, Alipore; 5, Swinhoe Street, Ballygunge, Calcutta.
Proposer: H. P. Shastri.
Seconder: M. Hidayat Hosain.

(92) *Fyfe, David Allan*, Assistant, Messrs. Shaw Wallace & Co., 4, Bankshall Street, Calcutta.
Proposer: N. F. Barwell.
Seconder: Johan van Manen.

The General Secretary reported that the Council proposed Mr. Durgadas Mukherji, M.Sc., Lecturer in Zoology, Calcutta, for election as an Associate Member of the Society. Voting papers for the election were then distributed. Mr. Durgadas Mukherji was duly elected.

The General Secretary reported the loss of membership during the previous month, by resignation, of:—

K. J. Purohti (An Ordinary Member, 1924).
G. C. Sturrock (An Ordinary Member, 1921).

The General Secretary reported that the elections of:

Bawa Balwant Singh (elected on 1-2-26),
Har Kishen Lal Bahl (elected on 1-2-26),
J. K. Nair (elected on 1-2-26) and
E. C. Hodgson (elected on 4-1-26),

had become null and void, under Rule 9.

The General Secretary reported that

H. R. Mehra (elected on 1-2-26)

had withdrawn his application for membership.

The General Secretary reported that the council had appointed Sir C. C. Ghose, as an additional member of the Publication Committee.

The following papers were read:

1. N. G. Majumdar.—*Some Notes on Buddhist Iconography.*

2. M. Hidayat Hosain.—*The Auto-bibliography of Mawlana "Abd al-Hakk ad-Dehlavi."*

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3. B. L. MUKHERJEE.—*Atharva Veda, Kanda XV.*

4. JOHAN VAN MANEN.—*Some further Notes on the "Wild Men" of Tibet and elsewhere.*

The Chairman announced the results of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The General Secretary reported that the fourth and last general lecture of the season would be delivered by Major R. B. S Sewell, I.M.S., on Wednesday, the 16th, at 6-15 p.m., and asked the members present to communicate to him the names of such non-Members as they might wish to be invited to the lecture.

The General Secretary reported that a meeting of the Medical section would be held on Monday, the 14th, at 5-45 p.m.

The General Secretary reported the installation of a copper plate cabinet, and drew attention to the newly published sale catalogues of publications in the Bibliotheca Indica.

The General Secretary made a statement regarding the membership total, and reported that during the month the total had touched the previous record of 519.

JULY, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 5th, at 5-30 P.M.

PRESENT.

RAI UPENDRA NATH BRAHMACHARI, BAHADUR, M.A., M.D., Ph.D., F.A.S.B., Acting President, in the Chair.

Members:

Agharkar, Dr. S. P.
Biswas, Mr. Kalipada
Bhaskaraiya, Mr. C.
Chapman, Mr. J. A.
Chaudhury, Mr. J.
Das-Gupta, Mr. H. C.
Ghose, Mr. T. P.
Hora, Dr. S. L.
Manen, Mr. Johan van
Mitter, Mr. B. P. D.
Moreno, Mr. H. W. B.
Sewell, Major R. B. S.
Shastri, MM. H. P.
and others.

Visitors:

Dutt, T.
Roak, M.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of twenty-five presentations of books, etc., which had been placed on the table for inspection.

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The following candidates were balloted for as Ordinary Members :

(93) *Hussain, Mohammed Moinuddin*, 1st Talukdar, Bir Nizam's State, *viâ* Ahmed Nagpur, P.O. Murshidpur.
Proposer : M. Hidayat Hosain.
Seconder : U. N. Brahmachari.

(94) *Richey, James Alexander*, C.I.E., Educational Commissioner with the Government of India, Simla.
Proposer : R. B. S. Sewell.
Seconder : Johan van Manen.

(95) *Mukerjee, P.*, M.A., B.L., Pleader, Jangipur Court, Gangadda, Dhanapatganj, Murshidabad.
Proposer : U. N. Brahmachari.
Seconder : H. C. Das-Gupta.

(96) *Shahidullah, Muhammad*, M.A., B.L., Lecturer, Dacca University, Ramna, Dacca.
Proposer : S. K. Chatterji.
Seconder : U. N. Brahmachari.

(97) *Mukerjea, Tarak Nath*, B.Sc., M.L.C., Zemindar. "Rajendra Bhaban," P.O. Uttarapara, Dt. Hooghly, E.I. Ry.
Proposer : O. C. Ganguly.
Seconder : J. N. Basu.

(98) *Banerji, S. K.*, Ph.D., Lecturer in Indian History, Lucknow University, Lucknow.
Proposer : B. Sahni.
Seconder : H. C. Das-Gupta.

(99) *Mukhopadhyaya, Prabhat Kumar*, M.A., Research Assistant, Calcutta University ; 27, Govinda Ghosal Lane, Bhowanipur Calcutta.
Proposer : U. N. Brahmachari.
Seconder : Sir D. P. Sarvadhikary.

(100) *Tyson, John Dawson*, I.C.S., U.S. Club, Calcutta.
Proposer : H. E. Stapleton.
Seconder : J. H. Lindsay.

(101) *Lyne, Howard William*, I.C.S., Additional Judge, Howrah ; United Service Club, Calcutta.
Proposer : H. E. Stapleton.
Seconder : J. H. Lindsay.

The General Secretary reported the death of :

D. B. Parasnis (An Ordinary Member, 1904).

The following papers were read :

1. Md. Abdul Aziz.—*Deccan in the 15th Century.*

2. U. N. Brahmachari and S. C. Brahmachari.—*Two Neolithic Stone Implements found in a Tank at Jamalpur.*

3. R. B. S. Sewell.—*A brief Account of sudden Mortality among the Fauna of a Tank.*

The President announced the results of the ballot for the election of Ordinary Members and declared all candidates duly elected.

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The General Secretary reported the receipt of a portrait in oils of the late Dr. N. Annandale presented by the Director and Staff of the Zoological Survey of India, Indian Museum, Calcutta.

The General Secretary reported that during the month the previous record of Ordinary membership (519 in the year 1912) had been passed.

AUGUST, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 2nd, at 5-30 P.M.

PRESENT.

RAI UPENDRA NATH BRAHMACHARI, BAHADUR, M.A., M.D., Ph.D., F.A.S.B., Acting President, in the Chair.

Members :

Agharkar, Dr. S. P.
Bery, Mr. A. R.
Bhaskaraiya, Mr. C.
Chapman, Mr. J. A.
Chandra, Rao Bahadur, R.P.
Chaudhuri, Dr. B. L.
Deb, Raja Kshitindra
Hora, Dr. S. L.
Insch, Mr. J.
Mahfuzul Huq, Mr. M.
McKay, Mr. J. W.
Manen, Mr. Johan van
Mitter, Mr. K. N.
Sanaullah, Mr. Md.
Sewell, Major R. B. S.
Shastri, MM. H. P.
Stapleton, Mr. H. E.
Wadia, Dr. D. N.

Visitors :

Basu, Mr. D. N.
Bose, Mr. S. C.
Fyfe, Miss.
Majumdar, Mr. D. N.
Wood, Dr. Casey.

The Minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of fifteen presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for as Ordinary Members :—

(102) *Calder, Norman Douglas,* Deputy Traffic Manager, E.B. Ry.; 3, Belvedere Park, Alipore, Calcutta.
Proposer : H. E. Stapleton.
Seconder : J. H. Lindsay.

(103) *Oak, Madhava Ramchandra,* M.A., Professor of Philosophy and English Literature, Maharajah's College, Jaipur (Rajputana).
Proposer : S. P. Agharkar.
Seconder : S. L. Hora.

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(104) *Kirkwood, William Boyd*, Asst. Commissioner of Income Tax Bengal; United Service Club, Calcutta.
Proposer: R. B. S. Sewell.
Seconder: Johan van Manen.

(105) *Sohoni, Vishwanath Vishnu*, B.A., B.Sc., Meteorologist, The Observatory, Alipore, Calcutta.
Proposer: S. P. Agharkar.
Seconder: U. N. Brahmachari.

(106) *Majumdar, Dhirendra Nath*, M.A., Landholder, 42, Harrison Road, Calcutta.
Proposer: Haraprasad Shastri.
Seconder: U. N. Brahmachari.

(107) *Mukherjee, Jnanendra Nath*, D.Sc. (Lond.), F.C.S. (Lond.), Fellow of the Indian Chemical Society, Guruprasad Professor of Chemistry, University of Calcutta; 92, Upper Circular Road, Calcutta.
Proposer: P. C. Mitter.
Seconder: H. K. Sen.

(108) *Khettry, Benimadho*, Proprietor, Messrs. Gouri Shanker Khettry, Landholders, Bankers and Merchants, 15, Paggiyapatti, Barabazar, Calcutta.
Proposer: Vinayak Lal Khanna.
Seconder: M. Hidayat Hosain.

(109) *Giachetti, Baroness Nellie*, 238-A, Lower Circular Road, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: Johan van Manen.

(110) *James, John Langford*, Barrister, 2, Short Street, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: Johan van Manen.

(111) *De, Brajendra Nath*, M.A., I.C.S. (retd.), 11, Lower Rawdon Street, Calcutta.
Proposer: U. N. Brahmachari.
Seconder: M. Hidayat Hosain.

The General Secretary reported that there had been no loss of membership during the previous month by death.

The General Secretary reported the loss of membership during the previous month, by resignation, of:—

Shams-ul-Ulama Hafiz Nazir Ahmed (An Ordinary Member, 1924).

The following papers were read:—

1. H. E. Stapleton, Hidayat Hosain and R. Azoo.—*Chemistry in Iraq and Persia.*

2. R. Ramanatha Ayyar.—*The Martyrdom of St. Thomas, the Apostle.*

3. S. Ribeiro.—*A Note on a Simulid Larva.*

The President announced the results of the ballot for the election of Ordinary Members and declared all candidates duly elected.

The General Secretary reported that during the recess

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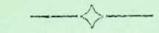
months of September and October no Ordinary Monthly Meeting of the Society would be held unless specially announced.



NOVEMBER, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 1st, at 5-30 P.M.

PRESENT.

RAI UPENDRA NATH BRAHMACHARI, BAHADUR, M.A., M.D., Ph.D., F.A.S.B., Acting President, in the Chair.

Members:

Bhaskaraiya, Mr. C.
Bose, Mr. M. M.
Brühl, Dr. P. J.
Chakladhar, Mr. H. C.
Chatterji, Mr. M. M.
Chaudhuri, Dr. B. L.
Chaudhuri, Mr. J.
Collenberg, Baron Rudt von
Das-Gupta, Mr. H. C.
Dikshit, Mr. K. N.
Dutt, Kumar M. M.
Ghose, Dr. E. N.
Ghose, Mr. T. P.
Hora, Dr. S. L.
Koester, Dr. Hans
Lindsay, Mr. J. H.
Maitra, Mr. S. K.
Manen, Mr. Johan van
Miles, Mr. W. H.
Mitter, Mr. B. P. D.
Mookerjee, Sir R. N.
Sarvadhikary, Sir D. P.
Shastri, MM. H. P.
Sewell, Major R. B. S.
Walton, Mr. E. B.

Visitors:

Bery, Mr. J. N.
Ghosh, Mr. B. K.
Guha, Mr. S.
Reid, Rev. John

The President in opening the meeting offered a few words of welcome to Sir R. N. Mookerjee, congratulating him on his safe return to India after the termination of his arduous labours on the Indian Currency Commission in England.

The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of fifty-two presentations of books, etc., which had been placed on the table for inspection.

The General Secretary reported that the following fifteen candidates had been elected Ordinary Members during the recess months, September and October, under Rule 7.

(112) *Jameson, Thomas Blandford*, M.C., M.A. (Cantab.), I.C.S., United Service Club, Calcutta.
Proposer: J. H. Lindsay.
Seconder: H. E. Stapleton.

(113) *Collet, Arthur Lowe*, Solicitor, Messrs. Leslie and Hinds, 6, Hastings Street, Calcutta.

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Proposer : S. L. Hora.
Seconder : Johan van Manen.

(114) *Bhatia, Bankey Behari Lal,* S.L.C., C.T., M.N.G.S., Geography Teacher, Government High School, Ajmer.
Proposer : S. L. Hora.
Seconder : N. Ottens.

(115) *Modi, Jal R. K.*, B.A., 4, Camac Street, Calcutta.
Proposer : D. N. Wadia.
Seconder : Johan van Manen.

(116) *Rau, S. Sethu, Rama*, Rao Bahadur, B.A., F.G.S., Geological Survey of India, Indian Museum, 27, Chowringhee, Calcutta.
Proposer : E. H. Pascoe.
Seconder : D. N. Wadia.

(117) *Westcott, Foss*, The Most Reverend, D.D. (Cantab.), Honorary D.D. (Oxon.), Lord Bishop of Calcutta, and Metropolitan of India, Burmah and Ceylon, Bishop's House, 51, Chowringhee, Calcutta.
Proposer : N. F. Barwell.
Seconder : U. N. Brahmachari.

(118) *Barhut, Thakur Kishoresinghji*, State Historian of Patiala Government, History and Research Department, Patiala.
Proposer : N. Ottens.
Seconder : H. P. Shastri.

(119) *Pugh, Lewis Pugh Evans*, B.A. (Oxon.), of Lincoln's Inn Barrister-at-Law, Temple Chambers, 6, Old Post Office Street, Calcutta.
Proposer : N. F. Barwell.
Seconder : Johan van Manen.

(120) *Wadhwana, M. M.*, Demonstrator in Geology and Geography, University College, Rangoon.
Proposer : H. L. Chhibber.
Seconder : S. L. Hora.

(121) *Nayar, B. R.*, M.A., Assistant Collector of Customs, Imperial Customs Service, Customs House, Calcutta.
Proposer : S. L. Hora.
Seconder : A. R. Bery.

(122) *Ahmad, Sayeed*, B.Sc. (Alig.), Headmaster, Osmania Technical Institute, H.E.H. The Nizam's Government : 5737, New Kachiguda, Near Mecca-Bauli, Hyderabad, Deccan.
Proposer : M. Hidayat Hosain.
Seconder : S. L. Hora.

(123) *Mills, James Philip*, I.C.S., c/o. Messrs Lloyds Bank, (King's Branch), Calcutta.
Proposer : H. E. Stapleton.
Seconder : J. D. Tyson.

(124) *Rao, Wuppala Lakshmana*, M.A., B.Sc., Dr. rer. Nat., Research Scholar, Bose Institute ; 52, Ripon Street, Calcutta.
Proposer : G. Varugis.
Seconder : S. L. Hora.

(125) *Agrawal, Krishna Murari*, B.Sc., C.E., Assistant Engineer, Mirchia Tola, Bareilly (U.P.).
Proposer : U. N. Brahmachari.
Seconder : S. L. Hora.

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(126) *Galstaun, Shanazan Galstaun,* M.A., D.M.R.E. (Cantab.), M.R.C.S., L.R.C.P. (Honorary, London), Medical Practitioner, Radiologist, Medical College Hospitals; Galstaun Park, Lower Circular Road and 39, Theatre Road, Calcutta.
Proposer: Sir Frank Connor.
Seconder: Johan van Manen.

The following candidates were balloted for election as Ordinary Members:

(127) *Chokhani, Sreenarayan,* Secretary, Shree Hanuman Pustakalaya, Public Library, 8, New Ghoosery Road, Salkea, Howrah.
Proposer: Haraprasad Shastri.
Seconder: U. N. Brahmachari.

(128) *Khan, Nawab Ahmad,* B.A., LL.B. (Alig.), Munsiff and Divisional Magistrate, Lingsugur Cantonment, Raichur, Deccan.
Proposer: U. N. Brahmachari.
Seconder: S. L. Hora.

(129) *Ramanujaswami, P. V.,* M.A., Vice-Principal, Maharaja's Sanskrit College, Vizianagram.
Proposer: Haraprasad Shastri.
Seconder: U. N. Brahmachari.

(130) *Bagchi, Prabodh Chandra,* Dr.-ès-Lettres (Paris), Member of the A.S. of Paris, Lecturer, Calcutta University; 15, Wellington Street, Calcutta.
Proposer: S. C. Mukerji.
Seconder: H. K. Deb.

The General Secretary reported the death of:

Jamini Bhusan Roy (An Ordinary Member, 1915).
Nawabzada Amin-ul-Islam (An Ordinary Member, 1919).
S. N. Hoon (An Ordinary Member, 1926).

The General Secretary reported loss of membership during the recess months, by resignation, of:

Suresh Chandra Ray (An Ordinary Member, 1924).
H. R. Nevill (An Ordinary Member, 1901).
P. Bosworth-Smith (An Ordinary Member, 1920).
Probhat Kumar Mukherjee (An Ordinary Member, 1916).

The General Secretary reported news received of the death of Mr. R. O. Douglas, I.C.S., (Honorary Numismatist of the Society since July 1924).

The General Secretary reported the withdrawal of the resignation of Shams-ul-Ulama Hafiz Nazir Ahmad.

The General Secretary reported that, in accordance with Rule 45, the Council submitted for confirmation the following change in the constitution of the Council made in one of the Council meetings held since the last Ordinary Monthly Meeting:

Anthropological Secretary:—The Rev. P. O. Bodding, vice Mr. H. E. Stapleton, *resigned.*

The appointment was confirmed.

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The following papers were read:

1. HARAPRASAD SHASTRI.—*General Considerations concerning the Ramayana.*

2. S. L. HORA.—*On the Manuscript Drawings of Fish in the Library of the Asiatic Society of Bengal:*—I. Fish Drawings in the Mackenzie collection.

3. SUKUMAR SEN.—*The Language of Asvaghosa's Saundarananda Kavya.*

4. BIBHUTIBHUSAN DATTA —*Hindu Values of π.*

5. S. R. BOSE.—*Artificial Cultures of wood-rotting Fungi common in Forest Areas.*

6. BRAJA LAL MUKHERJEE.—*Atharva Veda, Kanda XVI.*

7. MOHINI MOHAN CHATTERJI.—*Some Marriage Customs in Bengal.*

8. MOHAMMAD HAMID.—*Remarks on Khan Saheb 'Abdul Wali's Notes on Archaeological Remains in Bengal.*

The President announced the result of the ballot for the election of Ordinary Members and declared all candidates duly elected.

DECEMBER, 1926.

An Ordinary Monthly Meeting of the Asiatic Society of Bengal was held on Monday, the 6th, at 5-30 P.M.

PRESENT.

MAHAMAHOPADHYAYA HARAPRASAD SHASTRI, C.I.E., M.A., F.A S.B., in the Chair.

Members:

Barwell, Lt.-Col. N. F.
Bhaskaraiya, Mr. C.
Bose, Mr. M. M.
Brown, Mr. Percy
Chatterji, Mr. M. M.
Chaudhuri, Dr. B. L.
Chaudhuri, Mr. J.
Deb, Raja Kshitindra
Fleming Mr. Andrew
Ghosh, Dr. E. N.
Ghosh, Mr. T. P.
Gupta, Mr. S. N.
Hobbs, Mr. H.
Hora, Dr. S. L.
Insch, Mr. J.
Jain, Mr. C. L.
McKay, Mr. J. W.
Manen, Mr. Johan van
Mitter, Mr. B. L.
Mitter, Mr. B. P. D.
Mookerjee, Mr. P. N.
Mukherji, Mr. J. N.
Pascoe, Dr. E. H.
Pruthi, Mr. H. S.
Roy, Mr. S.
Sewell, Major R. B. S.
Taraporewala, Mr. I. J. S.
Westcott, Most Rev. F.

Visitor:

Chatterji, Mr. T.

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The minutes of the last meeting were read and confirmed.

The General Secretary reported receipt of seventeen presentations of books, etc., which had been placed on the table for inspection.

The following candidates were balloted for as Ordinary Members.

(131) *Singh, Ram*, Executive Engineer, E.B. Ry., 3, Koilaghat Street, Calcutta.
Proposer : U. N. Brahmachari.
Seconder : S. L. Hora.

(132) *Sen, Kanai Lal*, Officiating Secretary, Bengal Health Association, 55/2-A, Badridas Temple Street, Calcutta.
Proposer : U. N. Brahmachari.
Seconder : N. Ottens.

(133) *Bohidar, Narayan*, Deputy Inspector of Schools, Kalapandir State, P.O. Bhawani, Patna, viâ Sambalpore, B.N. Ry.
Proposer : U. N. Brahmachari.
Seconder : H. C. Das-Gupta.

(134) *Brahmachari, Bepin Behari*, D.P.H., Assistant Director of Public Health, Bengal; 18, Mohun Lal Street, Calcutta.
Proposer : U. N. Brahmachari.
Seconder : Johan van Manen.

(135) *Ghosh, Birendra Nath*, F.R.F.P.S. (Glas.), L.M. (Dublin), Medical Practitioner, 9, Taltollah Lane, Calcutta.
Proposer : U. N. Brahmachari.
Seconder : S. L. Hora.

(136) *Aiyangar, S. Krishnaswami*, M.A., Ph.D., M.R.A.S., F.R. Hist. S., Professor, University of Madras; "Srijayavasam," 1, East Mada Street, Mylapore, Madras.
Proposer : U. N. Brahmachari.
Seconder : S. L. Hora.

(137) *Banerji, Nabajiban*, M.B. (Cal.), Medical Practitioner, 24/3-B, Ramanath Kabiraj Lane, Calcutta.
Proposer : A. C. Ukil.
Seconder : C. C. Bose.

(138) *Ram, A. Subba*, Medical College, Bangalore.
Proposer : F. H. Graveley.
Seconder : M. Hidayat Hosain.

(139) *Singh, Bawa Ramnik*, Rai Bahadur, Civil Engineer (Indian State Railways), Deputy Chief Engineer, E.B.Ry., 3, Koilaghat Street, Calcutta.
Proposer : S. L. Hora.
Seconder : R. B. S. Sewell.

(140) *Guha, Surendranath*, Vakil, High Court, Government Pleader, 18, Ram Mohan Dutt Road, Bhowanipur, Calcutta.
Proposer : M. M. Chatterji.
Seconder : Johan van Manen.

(141) *Hora, Gobind Sahai*, Commission Agent and Pensioner, Kasur Mandi, Lahore (Punjab).

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Proposer : S. L. Hora.
Seconder : R. B. S. Sewell.

(142) *Bery, Paramanand,* Partner, Messrs. B. D. Bery & Co , Engineers, 43, Ripon Street, Calcutta.
Proposer : S. L. Hora.
Seconder : H. S. Pruthi.

(143) *Said, Qazi Mohamed,* B. A., H.P., Second Master, N.A.C. High School, Chichawalin (Punjab).
Proposer : U. N. Brahmachari.
Seconder : R. B. S. Sewell.

(144) *Sawyer, Arthur Manuel,* Forester and Botanist, Research Assistant, Botanical Section ; Assistant Director of Agriculture (Botany) ; College of Agriculture, Mandalay (Burma).
Proposer . U N. Brahmachari.
Seconder : Johan van Manen.

(145) *Nag, Kalidas,* M.A. (Cal.), D.Litt. (Paris), Lecturer in Ancient Indian History and Culture, Calcutta University; 91, Upper Circular Road, Calcutta
Proposer : H. P. Shastri.
Seconder ; Johan van Manen.

(146) *Roy, Amarendra Narayan, Kumar*, B.A., Zemindar, Jemo Rajbati, Jemo, P O. Kandi, Dt. Murshidabad.
Proposer : U. N Brahmachari.
Seconder : M. Hidayat Hosain.

(147) *Ghosh, B. K.*, Barrister-at-Law, 10, Rawdon Street, Calcutta.
Proposer : Sir C. C. Ghose.
Seconder : G. H. Tipper.

(148) *Banerjee, S. N.*, Barrister-at-Law, P-307, New Circular Road, Calcutta.
Proposer : Sir C. C. Ghose.
Seconder : G. H. Tipper.

(149) *Roy, A. K.*, Barrister-at-Law, 9, Nandan Lane, Bhowanipur, Calcutta.
Proposer : Sir C. C. Ghose.
Seconder : G. H. Tipper.

(150) *Rahman, Syed Mobinur,* B.A., LL.B., M.L.C., Vice-President Municipality, Vakil, Akola (Berar).
Proposer : C. S. Fox.
Seconder : G. H Tipper.

(151) *Dutt, Jogen Chander,* M.A., B.L., Attorney-at-Law, 17, Manicktollah Street, Calcutta.
Proposer : M. M. Chatterji.
Seconder : O. C. Gangoly.

(152) *Chunder, Nirmal Chundra,* Solicitor, 23, Wellington Street, Calcutta.
Proposer : O. C. Gangoly.
Seconder : M. M. Chatterji.

(153) *Winfield, Walter Warren,* B.A , B D., Missionary, c/o. Baptist Missionary Society, 19, Furnival Street, London, E.C. 4.
Proposer : Johan van Manen.
Seconder : G. H. Tipper.

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The General Secretary reported the death of :

Abdul Wali (An Ordinary, Life Member, 1894/1911).
Miss Flora Butcher (An Ordinary Member, 1900).

The General Secretary reported that

Baroness N. Giachetti (elected on 2-8-26),

had withdrawn her application

The following papers were read :

1. T. V. RAMAKRISHNA AIYER.—*Notes on some Indian* Lepidoptera *with abnormal Habits.*

2. D. N. MAJUMDAR.—*The bigonial Breadth of some Hos of Kolhan.*

3. D. N. MAJUMDAR.—*Death and connected Ceremonies of the Hos of Kolhan in Singhbhum.*

4. H. HOSTEN.—*Fr. N. Pimenta's Annual Letter, Goa, December* 21st, 1599.

5. H. HOSTEN.—*Fr. N. Pimenta, S.J., on Mogor, Goa, December* 1*st*, 1600.

6. H. HOSTEN.—*Fr. N. Pimenta's Annual of Margão, December* 1*st*, 1601.

7. H. HOSTEN.—*Three Letters of Fr. Joseph de Castro, S.J., and the last year of Jahāngīr, August* 24, 1626—*August* 15, 1627.

8. H. HOSTEN.—*Eulogy of Fr. Jerome Xavier, S.J., a Missionary in Mogor,* 1549—1617.

9. H. HOSTEN.—*Some Letters of Fr. Jerome Xavier, S.J., to his Family,* 1593—1612.

10. H. HOSTEN.—*Some Notes on Bro. Bento de Goes, S.J.,* 1583—*d.* 1607.

11. M. M. CHATTERJI.—*Brahmanism in Bengal.*

12. M. M. CHATTERJI.—*A. Study of Bengali Customs :—* I. *Survivals of Group Marriage.* II. *Mock Marriage.*

MM. Haraprasad Shastri made a communication concerning the Visnupur Malla Era, equating its beginning with 616 of the Saka Era, or 694 A.D.

The General Secretary reported presentation to the Society by the Assam Government of a copy of a photographic reproduction of a unique Ahom Chronicle.

The General Secretary drew attention of the members to some works of special interest presented to the Society during the last month.

The Chairman announced the result of the ballot and declared all the candidates duly elected.

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The General Secretary reported that H.E. the Governor of Bengal had consented to be present at the Annual Meeting of the Society to be held in February, 1927.

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OBITUARY NOTICES.

Maharaja Jagadindra Nath Roy.

Maharaja Jagadindra Nath Roy of Natore was the scion of an old and wealthy family in Bengal, being a descendant of Rani Bhowani of pious memory. He was a man of culture and refinement. Endowed with many qualities of head and heart, he was, above all, a gentleman. Music and Bengali literature claimed him as a votary. He was particularly efficient with the musical instrument—*Pakhwaj*. Among his literary activities may be mentioned his editorship of a Bengali magazine "Manashi and Marmabani" and authorship of two books "Dadar Duradrista" and "Nur Jahan." He was President of the Bengal Literary Conference held at Munshiganj, two years ago. A patron of Bengali literature, he was a constant though unobtrusive friend of many indigent writers who will miss his cheery encouragement and material help.

B. L. Mitter.

(*Read in the Ordinary Monthly Meeting, 1st March, 1926.*)

Manomohan Ganguli.

(1880—1926.)

Babu Manomohan Ganguli, M.A., B.E., died at the early age of 46. His death is deeply mourned by all who knew him or his work. He was an enthusiastic worker and an accurate and a deep-read scholar. Having passed his Engineering examination in the Sibpur College, Manomohan joined the service of Messrs. Martin & Co. But his taste for archaeology and ancient Indian history made him long for an appointment in the Archaeological Department. Failing that, he joined the Calcutta Corporation where he did some very good work. He was a voluminous writer both in Bengali and English in the various periodicals and magazines. But the great work for which he was known in the learned world is "Orissa Ancient and Mediæval." Many distinguished men have written on the arts and sculptures of that little country, but Manomohan Babu took comprehensive view of these, and classified and arranged them in historical and chronological order. His other work is a Handbook of Sculptures in the

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museum of the Bangiya Sahitya Parishad, which is distinguished from other works of this nature by a fullness in the description and the accuracy of details rarely excelled. When writing this Handbook he conceived the idea of housing these valuable sculptures in a proper house and joined the movement for erecting a Museum Hall for the Parishad. The hall will be an ornament to the northern quarter of the city when finished, but it is unfortunate that Mr. Ganguli fell ill while working hard to complete it and died leaving it unfinished. He had a hand in the erection of the Buddhist temple at No. 4, College Square, East. Mr. Ganguli was a very good man, his services were always at the command of the public and his energy and enthusiasm for work brought him to a premature grave.

HARAPRASAD SHASTRI.

(*Read in the Ordinary Monthly Meeting, 1st March, 1926.*)

EDWARD GRANVILLE BROWNE.

(1862—1926.)

The death of Professor Edward Granville Browne, the distinguished Persian and Arabic scholar, and an Honorary Fellow of this Society, will be deeply mourned by the world of scholarship and more particularly by the *literati* and the people of Persia. Born on 7th February 1862, at Uley near Dursley, he was given his elementary and secondary education at Glenalmond, Eton. It was the original plan of his father, Sir Benjamin C. Browne, (of the engineering firm of Hawthorn, Leslie & Co.), to see this eldest son succeed him in the profession of an engineer; but the Crimean War of 1877-78 brought about a sudden change in young Browne. He watched the progress of the war with unabated interest and was so much impressed by the bravery and suffering of the Turks that, as he states in his *A Year Amongst the Persians*[1] "ere the close of the War I would have died to save Turkey, and I mourned the fall of Plevna as though it had been a disaster inflicted on my own country. And gradually pity turned to admiration, and admiration to enthusiasm until the Turks became in my eyes veritable heroes and the desire to identify myself with their cause, make my dwelling amongst them, and unite with them, in the defence of their land, possessed me heart and soul." His ambition was to join the Turkish army as an officer and, for the purpose, he proposed to enter the British army and after having "attained the rank of a Captain," as stated by him, "then to resign my commission and enter the service of the

[1] pp. 7, 8.

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Ottoman Government, which, as I understood, gave a promotion of two grades." So he began the study of the Turkish language in which he received much help and encouragement from an Irish Clergyman, as also from Sir James (then Mr.) Redhouse. But his father did not like him to enter the army and "proposed medicine as an alternative for engineering," which suggestion young Browne readily accepted, as this would also give him the chance of entering the Turkish army as a Medical Officer.

In October 1879, he went to Pembroke College, Cambridge, where he began the study of medicine, but his interest in the Near East remained undiminished. As, however, he could not get tuition in Turkish, he started the study of Arabic under Professor Palmer, and later, in the Long Vacation of 1880, began learning Persian with an "Under-graduate of Indian nationality, who, though the son of Hindoo parents converted to Christianity, had an excellent knowledge not only of Persian and Sanskrit but of Arabic." In 1882, Professor Browne took his Tripos in Natural Sciences, and in June 1882 succeeded in passing his second M.B. Examination, on the result of which he was permitted by his father to spend two months of the Long Vacation in Constantinople. On his return, he studied for the Indian Languages Tripos, which he succeeded in obtaining in 1884. It was during this time that he came in contact with a remarkably learned but eccentric Persian Scholar Mīrzā Muḥammad Bāḳir with whom he passed his leisure hours, and learned from him, as he says, "much that was of value to me besides the correct Persian pronunciation." After leaving Cambridge towards the end of 1884, Browne joined the St. Bartholomew's Hospital where, it would appear, he remained till the beginning of 1887. After passing the final examinations of the College of Surgeons and the College of Physicians, he was, in May, 1887, elected a Fellow of Pembroke College.

After completing his career at the University, Edward Browne started for Persia, in September 1887, which was, perhaps, the most momentous event in his life and which, as a matter of fact, made him an ardent admirer of Persia and the Persians. He has given a graphic account of the "impressions as to the life, character, and thought of the people of Persia, received during twelve months' residence in that country in the years 1887-88," in his excellent "*A Year Amongst the Persians*," (1893), a careful perusal of which gives a true insight into the life and character of the people of that country. Immediately on his return, Prof. Browne was appointed a lecturer in Persian to the Cambridge University, which post he held till the year 1902, when he was appointed Sir Adams' Professor of Arabic, in which capacity he served up to the time of his death. Among other distinctions of which Professor Browne was the recipient, there was his election as a Fellow of the British

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Academy in 1903 and also his election to the Fellowship of the Royal College of Physicians in 1911, and to the Honorary Fellowship of the Asiatic Society of Bengal in 1911.

During his travels through Persia, Prof. Browne had the unique experience of coming in direct contact with the then much persecuted Bābīs, *viz.*, the followers of 'Alī Muḥammad Bāb, and gaining first-hand knowledge as to their religious tenets and practices. He placed the whole store of his wonderful information regarding them at the disposal of the English-knowing public in his "*A Year Amongst the Persians*" and in other books which he published on the subject. In 1891 he published the Persian text and translation of "*A Traveller's Narrative, written to illustrate the episode of the Bāb*;" and two years later the English translation of *Tārīkh-i-Jadīd* or the New History of Mīrzā 'Alī Muḥammad Bāb. In 1910 he brought out an edition of Ḥājī Mīrzā Jānī Kāshānī's *Nuḳṭat-ul-Kāf*, (or the earliest history of the Bābīs composed before 1852) which he edited with an extremely valuable introduction from the unique Paris MS. (Suppl. Persan, 1071). His last work on the Bābīs was "*Materials for the Study of Bābī Religion*" which he published in 1908. In addition to the above books, he contributed four valuable articles to the Journal of the Royal Asiatic Society on *the Bābīs of Persia* (1889, pp. 485,881); *Bābī texts edited by Rosen* (1892, p. 259); *Catalogue and Description of 27 Bābī MSS.* (1892, pp 433,637); *Personal Reminiscenses of the Bābī Insurrection at Zanjān in 1850* (1897, p. 761).

Besides making important original contributions to the History of Bābism, Professor Browne has laid the students of Muḥammadan literature, and more especially of Persian, under a deep debt of gratitude by publishing a number of valuable catalogues of Persian and Arabic MSS. In 1896 he published the *Catalogue of Persian MSS. in the Cambridge University Library* giving a description of a large number of MSS. He also published a *Hand-list of Muḥammadan MSS.* preserved in the Library of the above University (1900) and brought out a *Supplement* to the same in 1922. In 1902 he prepared, in collaboration with Dr. (now Sir) E. Denison Ross, *A Catalogue of Two collections of Persian and Arabic manuscripts preserved in the India Office Library*. He also contributed an article to the Journal of the Asiatic Society describing the *Persian MSS. of Sir A. Houtum-Schindler* (1917, p. 657).

In 1901 Professor Browne started the Persian Historical Texts Series, in which he published well edited texts of Dawlatshāh's well-known *Taḏkirat-ush-shu'arā*', (1901), and Muḥammad 'Awfī's *Lubāb-ul-Albāb* (in two parts) which is perhaps the oldest extant biography of Persian Poets (1903). He decided to close this Series in 1906 as the foundation of the E. J. W. Gibb Memorial Trust in 1904 was, as Prof. Browne remarks in his editorial preface to the *Taḏkirat-ul-awliyā*', (Part II),

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"catholic enough to include in its scope, and wealthy enough to clothe in print, any work which could appropriately be included in this Series." For the new series, Professor Browne edited *Ibn Isfandiyār's History of Ṭabaristān* (1905) and in collaboration with Dr. R. A. Nicholson and A. Rogers, Sir J. Redhouse's translation of *Al-Khazrajī's History of the Rasūlī Dynasty of Yaman* (1906–1908). He also published *Shams-i-Ḳays'* valuable work on Rhetoric and Prosody, *viz*, *Al-Mu'jam fī-Ma'ā'iri-Ash'āri'l-'Ajam* in joint editorship with Mīrzā Muḥammad of Ḳazwīn, a Persian Scholar of extraordinary erudition and remarkable abilities. In 1910 he published the *Tārīkh-i-Guzīda* of Ḥamdullāh Mustawfī, reproduced in facsimile from an old MS. with introduction and indexes together with a summary of the same in English (1914); and in 1921 brought out, in the same series, a revised English translation (with notes, etc.) of the *Chahār Maḳāla* of Niḍāmī 'Arūẓī, which had previously been edited at his suggestion by his friend, Mīrzā Muḥammad of Ḳazwīn.

Of the publications dealing with the politics of Persia, there are two of remarkable value and interest, *viz.*, (1) *The Persian Revolution* (*1905–09*) which contains the history of the constitutional movement in Persia, and (2) *The Press and Poetry of Persia*, 1914, which besides containing an account of the Persian Press, contains some very fine poems written by modern, nationalist poets of Persia. Professor Browne warmly expoused the cause of the constitutionalists of Persia and warned his countrymen against their Anti-Persian policy. For this purpose, he published certain pamphlets three of which I mention here :—

A brief Narrative of recent events in Persia (1909) : *The Persian Crisis of December 1911*; *how it arose and whither it may lead us* (1912) : The *Reign of Terror in Tabriz*: *England's Responsibility*, (1912).

His contribution to the subject of the languages and sects of Persia is primarily confined to his articles published in the J.R.A.S. which in their chronological order, are as follows: *Some notes on the poetry of the Persian dialects* (1895, p. 773.); *A specimen of the Gabrī dialect of Persia* (1897 p. 103.); *Some notes on the literature and doctrines of the Ḥurūfī sect* (1898, 61.); *Further notes on the literature of the Ḥurūfīs and their connection with the Biktāshī order of the dervesh*es (1907, p. 533). In addition to the above works his *Arabian Medicine* (1921) containing Fitzpatrick lecturers delivered at the Royal College of Physicians, is a valuable addition to our knowledge of the history of the medicine of the Arabs. He has also placed the students of Turkish literature under a deep obligation by editing the late E. J. W. Gibb's monumental *History of the Ottoman poetry* (Vols. I–VII).

He also contributed a number of other articles to the Journal

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of the Royal Asiatic Society describing certain little-known MSS. and bringing to light the materials of a number of valuable works. They are as follows:—*Description of an old Persian commentary on the Ḳur'ān* (1894, p. 417); *Dawlatshāh's Lives of the Persian Poets* (1897, 942); *'Umar Khayyām* (1899, p. 409); *The Chahār Maḳālā of Niẓāmī 'Arūḍī Samarḳandī* (1899, pp. 613, 757). *The Sources of Dawlatshāh* (1899, p. 37); *Some account of the Nihāyat'l-irab fī Akhbari'l-Furs wa'l-'Arab* (1900, p. 195); *Biographies of Persian poets contained in Ch. V, Sec. 6 of the Tārīkh-i-Guzīda* (1900-1901, pp. 721, I); *Account of a manuscript History of Iṣfahān*, (1901, pp, 411, 661); *Account of a manuscript History of the Saljūḳs in the Schefer collection of the MSS. in the Bib. Nationale of Paris* (1902, pp. 567,849); *Notes on the contents of the Tārīkh-i-Jahān Gusha of 'Atā' Malik Juwainī* (1904, pp. 11, 27); *Nāṣir-i-Khusrau, Poet, Traveller and Propagandist* (1905 p. 313); *An English Translation of Mīrzā Muḥammad ibn 'Abdul Wahhāb of Ḳazwīn's article on Mas'ūd Sa'd-i-Salmān* (1905, p. 693; 1906, p. 11); *Suggestions for a complete edition of the Jāmi'-ut-Tawārīkh of Rashīd-uddīn Faẓlullāh* (1908, p. 17); *An apparently unique MS. history of the Ṣafawī dynasty of Persia* (1921, p. 395). The two following lectures which he delivered before the Persia Society have also come out in print: (1) *The literature of Persia* (a lecture delivered on April 26, 1912), and (2) *The Persian Press and Persian Journalism* (a lecture delivered on May 23, 1913). And the lecture which he delivered before the Central Asian Society on *the Persian Constitutionalists* was published in 1909. It is also probably certain that Professor Browne must have contributed certain articles to the French Journals but, I am afraid, I am not just at present in a position to give a full list of such contributions. I may, however, mention one such article on the *Mujmal* of Aḥmad bin Muḥammad surnamed Faṣīḥ al-Khawāfī which he contributed to *Le Muséon* (Sér, III., Tom 1., No. 1.).

Lastly we come to his monumental *Literary History of Persia* which has rightly been described as his *magnum opus*. It contains a complete survey of the literature of Persia from the earliest times down to the year 1924, which he published in four big volumes between the years 1902 and 1924. The first two volumes of the series (*A literary History of Persia*, from the earliest times until Firdawsī, 1902, and a continuation of the same upto Sa'dī, 1906) appeared in the Library of Literary History Series started by T. Fisher Unwin and the last two volumes, although appearing under separate titles and published by the Cambridge University Press.—*Persian Literature under the Tartar Dominion* A.D. 1265–1502, (1920) and *Persian literature in Modern Times* 1500–1924,—are, as a matter of fact, a continuation of the work which the author began in 1902. It is needless to say that these four volumes are a monument

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of painstaking research, wide and varied reading and untiring labour and bear the stamp of high scholarship and deep sympathy for the people, whose vast literature and marvellous civilisation, he undertook to describe and discuss.

Professor Browne was held in high esteem by Orientalists all over the world, which is testified to by the fact that on the occasion of his 60th birthday in 1922, oriental scholars of the whole world presented him with a Memorial Volume, containing their original articles on various subjects. These were collected and edited by Sir T. W. Arnold and Dr. R. A. Nicholson and entitled *'Ajab Nāmah* as عجب نامه after the initial letters (E. G. B.) of Professor Browne's name. The Persians also showed their gratitude to their friend and well-wisher, and took the opportunity of presenting him with an Address which was signed, among others, by the then Prime Minister of Persia and two of his predecessors. The following translation of the address will serve to show the esteem in which he was held by the people, whose literature and civilisation he made the special study of his life, and for supporting whose cause he alienated the sympathy of a large section of his countrymen :—

"On this occasion, when the sixtieth year of the honoured Master reaches its conclusion, we, the undersigned, not only on our own part but on behalf of our appreciative countrymen, offer you our sincere congratulations and heartfelt greetings and pray God Most High to grant health and length of life to that true friend of Persia. Your services to learning generally, and to the Persian language and literature particularly, are such as tongue cannot declare nor pen describe. We now profit by this opportunity to express our gratitude for the labours which you have undertaken for us and for our country whereby you have made the Persian nation your eternal debtor. We are sending a *Kāshān* carpet as a gift to your honoured presence, and we hope that you will add to our gratitude and indebtedness by accepting it."

And now on his death (which took place on the 6th January, 1926.) the *intelligentsia* of Persia is in mourning. It appears from the *Sitāra-i-Īrān* of 17th January (a Persian daily published at Tehran) that a condolence meeting attended by a large number of scholars, poets and politicians of Persia was held in the Hall of the Ministry of Education and was addressed, amongst others, by the Minister of Education and Āḳā Taḳī Zāda, a well-known Persian scholar of high attainments. At that meeting it was declared that Professor Browne had undone the mischievous work of the author of *Ḥājī Bābā* and rehabilitated Persia in the estimation of the world. The Radical party of Persia also was not slow in paying its debt of gratitude to the late lamented Professor and organised a meeting at the Grand Hotel of Tehran which was presided over by Āḳā Dāwar, the Minister of Public Works, the leader of the

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party, and was largely attended by the Radicals, men of letters, European and American Consuls and the representatives of various nations. There is also a proposal that a fitting memorial to the deceased Professor should be set up, and the *Sitāra-i-Īrān* has suggested that, for the time being, one of the important parks of Tehran, as for instance *Khiyābān-i-Nāṣirīya* may be named after him. But a man like the late Professor Browne, in point of fact, needs no memorial truer and more lasting than his own monumental work, which the march of culture will not antiquate and the vandal hand of time will reverently spare.

M. Hidayat Hosain.

(Read in the Ordinary Monthly Meeting, 1st March, 1926.)

Sir Alfred Woodley Croft.

(1841—1925.)

Sir Alfred Croft came to Calcutta in the sixties of the last century as Professor of Philosophy in the Presidency College. His qualities as a clear-headed quick-witted scholar, and an able administrator were perceived very early in his career and he became a centre of attraction of scholars and administrators. Sir Ashley Eden's discriminating power selected him as the Director of Public Instruction from amongst a large number of very esteemable men who shed a lustre in the Department of Education. Sir Alfred held the appointment for 19 years and was the earthly Providence of the men in his department. Sir Alfred's advice was sought by all officers of the Governments of Bengal and India and his social qualities as a jovial young bachelor made him the darling of the European community of Calcutta. He took great interest in all research work, literary and scientific. He encouraged Sarat Chandra Das to undertake the difficult task of a Tibetan expedition and research in Buddhism and was Sarat Chandra's supporter throughout his career in India and thereafter.

He entered the Asiatic Society early and rose to be its President for two years. All through his career in India he was the life and soul of the Calcutta University, and he was the first Director of Public Instructions who rose to be its Vice-Chancellor. The work of his department, to say in the terms of a Sanskrit metaphor, was in the "Mirror of his nail," so he had time to help others and even the Government in other department. He used to call himself the "Etcetera" department of Government. He knew his men very well and could requisition their services in their special line quickly and effectively. He retired in proper time but he kept constant correspondence, loving and affectionate to his old friends in India. His correspondence was a source of inspiration to all of them.

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In England he lived in retirement but actively helped his neighbours in their local affairs. He lost his eyesight in extreme old age. He died last year lamented and regretted by a large number of friends, both in India and in England.

HARAPRASAD SHASTRI.

(*Read in the Ordinary Monthly Meeting, 1st March, 1926.*)

LORD CARMICHAEL.

(1859—1926.)

Thomas David Gibson-Carmichael, the first Baron of Skirling, was the eldest son of the 13th Baronet. He was born at Edinburgh on the 18th March, 1859 and was educated at St. John's College, Cambridge. His first connection with India dates from 1911 when he came to Madras as Governor of that province. A year later he was transferred to Bengal, being appointed the first Governor of this province. From the very commencement of his tenure of office he took a keen interest in both scientific and artistic matters and one of the first visits that he paid in his capacity as Governor was to the Indian Museum. It was during his term of office in 1914 that two events of very great importance to the scientific world of India took place, namely the celebration of the centenary of the Indian Museum, with which Lord Carmichael was connected as President of the Centenary Committee, and the inauguration meeting of the Indian Science Congress, of which he was the first Patron. During the whole period of his office as Governor of this province Lord Carmichael took a keen interest in the affairs of the Asiatic Society of Bengal and during the years 1913 and 1914 he was our President. At the conclusion of his first year of office he delivered the presidential address to the Society at its Annual Meeting in February 1914. Lord Carmichael was proud of his election and in his presidential address he remarks "I should like to thank the members for the honour they have done me in electing me to the proud position of the President of the premier scientific Society in India." His interest in research work was by no means confined to Calcutta and its old established institutions and he did his best to stimulate research work in a number of other and younger centres throughout the whole province of Bengal, such as Dacca, Rajshahi and Rangpur. He was himself keenly interested in zoology and more particularly in the groups of spiders and insects. Throughout his Governorship he not only made collections himself, but he also employed collectors to work for him, and in this way he got together a large collection, which he sent to the Indian Museum

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for identification. Many of the specimens collected proved to be new and his name has been perpetuated in a gigantic Tipulid, *Tipula Carmichaeli*, which he himself captured in his bath. With great generosity His Excellency arranged to distribute the specimens thus obtained to Museums in India, Australia and Great Britain. He engaged the services of Mr. C. A. Paiva, Special Entomological Assistant in the Zoological Section of the Indian Museum, whose post had been abolished by the Government of India, as his private assistant in order to arrange for the naming and the distribution of the specimens of the Carmichael collection and he paid many informal visits to the Zoological Section of the Indian Museum in order to examine his collections and to see that the work was being properly carried out. He had planned to establish in Darjeeling a Museum that was to be under the control of the Zoological Survey of India. The scheme, however, never came to complete fruition owing to the necessary funds not being available. In no sphere of activity were Lord Carmichael's interest more marked than in that of art. From his first arrival in Madras he began to study the artistic efforts of the Indian people and to collect choice specimens of their handiwork. Metal-work, especially jewellery, and textiles were his special delight and he not only gathered around him examples of these crafts but made himself acquainted with all the ancient lore connected with their manufacture and use. His collection soon became so large that they were lent to the Art Section of the Indian Museum where they form a special exhibit in a separate room arranged for this purpose. Hardly a week passed without Lord Carmichael visiting his collection and either adding to it or contributing useful notes with regard to some of his specimens. His artistic taste was exceptional, and his criticisms, delivered often with a quaint touch of humour, were of great value. On his retirement from the Governorship of Bengal it became possible for the Indian Museum to acquire the collection as a whole, and it now forms one of the most interesting exhibits in the Art Section. Since his retirement from India Lord Carmichael continued to take a keen interest in the affairs of the Indian Museum and for many years maintained a correspondence with the late Dr. N. Annandale. Lord Carmichael's activities in connection with the advancement of knowledge can best be summed up in the words of the late Sir Asutosh Mookerjee in his presidential address to the first Indian Science Congress, in which he remarked that Lord Carmichael's "devotion to the cause of scientific research is equalled only by his fame as a just and sympathetic statesman." Lord Carmichael died in London on the 16th January, 1926.

R. B. Seymour Sewell.

(Read in the Ordinary Monthly Meeting, 1st March, 1926.)

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Robert Sewell.

(1845—1925.)

Robert Sewell was the second son of Robert Burleigh Sewell, Solicitor of Newpost, Isle of Wight. He was a nephew of Miss Elizabeth Sewell, one of the pioneers in the movement for Education for Women of Dr. J. Edwards Sewell, for many years the Warden of New College, Oxford, and Dr. William Sewell, who was one of the Founders of Radley College. It was at this school that Sewell received his education. After leaving school he was for a short time at a crammers and in the year 1866 was successful in passing into the Indian Civil Service, his special subject being Mathematics. On his arrival in India he was posted to the Madras Presidency. From the very commencement of his career he took a keen interest in the study of the archaeology of this country, and he has been the Author of numerous papers and books on different aspects of Indian History. He first became connected with the Asiatic Society of Bengal in the year 1879, when he joined as a non-resident member, and he continued to be a member of this society until his retirement in 1894. After his retirement to England he became a Member of our daughter Society, the Royal Asiatic Society, and for some years served on its Council; but he still continued to take a keen interest in the mother Society. For the last few years he had been engaged on the preparation of genealogical tables of the South Indian Dynasties for the Government of India, which work he had completed a few weeks prior to his death, after an operation, at his residence in London on December 30th, 1925, at the age of 80.

R. B. Seymour Sewell.

(*Read in the Ordinary Monthly Meeting, 1st March, 1926.*)

Khan Sahib Maulvi Abdul Wali Saheb.

(1855—1926.)

The late Khan Sahib Maulvi Abdul Wali was, at the time of his death on the 24th of November, 1926, one of the senior members of the Society, having joined in the year 1894, 32 years before, as a mofussil member. In 1911 he came to Calcutta where he resided until his death. He belonged to a zemindar family of the Khulna district, whose ancestors came to India in the times of Emperor Shah Jahan and held important posts in the army department, many of them being the recipients of the title of Mullah. Abdul Wali was born in 1855,

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studied in the Calcutta Madrasah, then in the St. Xavier's and Presidency Colleges, in the same city. He served in the Registration Department, in Bengal for more than 30 years in various capacities. First as rural Sub-Registrar, then as Sale-Registrar, Sub-Registrar, Special Registrar, District Sub-Registrar, Inspector of Registration Offices in Bengal, and lastly as Registrar of Assurances, Calcutta. From early youth he was fond of study and he was especially interested in antiquarian research and Indian history. During the last 25 years he contributed about 20 papers to the Society's *Journal*, his last contributions dating from shortly before his death at the age of 71. He also published a number of pamphlets and booklets on Islamic subjects at his own cost. Persian was his chief love and he prepared a number of translations from Persian into English and from English into Persian. A few contributions in English and Continental Oriental Journals brought his name more prominently before western scholars and he corresponded with a number of European Orientalists.

After his retirement from Government service he used to spend the greater part of his time in the rooms of the Society where he was the most constant visitor. Literary tastes and temperament made him a somewhat lonely man. He had outlived many of his contemporaries and felt somewhat out of touch with the younger generation. His intellectual and social life was mainly centred in the surroundings and company which the Society furnished, and during the latter part of his life he was the most assiduous assistant at the Monthly General Meetings. The Khan Sahib represented an older generation amongst our membership and by his death a link with the past is broken. The Society is the poorer for his departure, which leaves a gap which cannot be entirely filled by any other. We salute the memory of an old friend and valued member, and pay our affectionate homage to him.

JOHAN VAN MANEN.

RAO BAHADUR DATTATREYA BALWANT PARASNIS.

(1870—1926.)

Rao Bahadur D. B. Parasnis, whose death, which occurred on the 31st March, 1926, robs India of one of its distinguished men, was a member of the Asiatic Society for nearly a quarter of a century, from 1904 to the time of his death.

He never took any active part in the Society's work, but was a scholar whose presence in the Society's ranks was highly appreciated. His valuable orientalistic and civic activities were directed in various channels mainly connected with his motherland, Mahārāṣṭra.

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Born in 1870, he began his literary career by founding and conducting a vernacular magazine, the *Mahārāṣṭra Kokil*, which continued for a few years. The period of 1898 to 1902 produced a number of books from his pen on historical subjects. In the former year he started a second magazine the *Bhārat Varṣa* which also had a fairly short life. After a visit to England he started his third journal in 1909, the *Itihās Saṅgraha*.

The last twelve years of his life were also fruitful from a literary point of view as they produced another half a dozen useful historical works, all on subjects connected with his province. The deceased scholar was a great collector of books, documents, paintings and coins. He accumulated a collection of considerable value. It was his intention to make this public property by the foundation of a museum at Satara, near Bombay, where he resided. The Bombay Government built a suitable building for it, but as far as we are aware the definite transfer of the collection had not yet been effected at the time of his regretted death.

JOHAN VAN MANEN.

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PROCEEDINGS OF THE MEDICAL SECTION MEETINGS, 1926.

FEBRUARY, 1926.

A meeting of the Medical Section was held on Monday, the 15th, at 5-45 P.M.

PRESENT.

MAJOR H. W. ACTON, I.M.S., in the chair.

Members:

Bose, Dr. S. R.
Chatterji, Major K. K.
Chopra, Major R. N.
Cooper, Mr. H.
Doxey, Mr. F.
Harnett, Major W. L.
Knowles, Major R.
Megaw, Lt.-Col. J. W. D.
Mitter, Dr. B. P. D.
Mukerjee, Dr. G. N.
Stapleton, Miss Dr. G.

Visitors: 16.

The minutes of the previous meeting having been confirmed and signed, Major R. N. Chopra, M.D., I.M.S., read a paper on "The problem of the supply of medical relief in the rural areas of India."

The author discussed fully the very difficult problem of how to supply relief to the rural areas of India, and the growth of the various official medical services under Government. The tendency of the qualified Indian medical profession to congregate in the large towns was commented on; thus in Calcutta it is estimated that there is one qualified medical practitioner resident per 1,550 persons, whereas in the *mofussil* outside Calcutta the proportion is 1 medical practitioner per 38,000 of the population. Perhaps some 90 per cent. of the rural population to-day seek medical relief at the hands of followers of the ancient indigenous systems of medicine or from quacks. Folklore plays a prominent part in medical relief in the *mofussil* areas, and even the *bania's* shop and the travelling *pansari* and itinerant *kabiraj* or *hakim* play a large part in treating the rural population.

The author next proceeded to give an account of the growth in India of the different 'systems' of medicine and of the present position. The chief cause of the present inadequacy of medical relief in the rural areas is the general poverty of the people; whereas the average annual income per head in the United States is about £70 per head, and £50 in the United Kingdom, it is only £3 in India. The old hospital assistant

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class, which was especially created to meet this problem, has now been converted into a class of Sub-Assistant Surgeons, whose training is equal to that of the Assistant Surgeon class, and who are now tending to gather into the large cities.

To lower the standard of training of medical graduates will not solve the problem, but perhaps something can be done to improve the training of the practitioners of the ancient indigenous systems. The subsidising of independent medical practitioners to settle in the *mofussil* is a measure which is being tried in some provinces. Finally, there is to-day a divorce between the Medical Relief and Public Health Departments; the two should work together hand in hand.

At the conclusion of Major Chopra's paper a lively discussion took place, and a reporter—who was present—was asked to withdraw in order that the subject might be discussed *in camera* among the medical men present. Major Acton refused to recognise any 'system' of medicine; there could only be one, modern scientific medicine. Col. Megaw insisted that the true solution to the problem lay in the awakening of a 'sanitary conscience' in the masses of India by ceaseless public health propaganda. Dr. U. P. Basu opposed any suggestion to lower the standard of medical education. Mr. J. G. Bhandari, speaking from the point of view of finances, commented that the indigenous systems were cheaper. A visitor who was apparently a *kabiraj* advocated an increase of cheaper medical schools in the *mofussil*, and State subsidy for the indigenous systems, with teaching in the vernaculars. Major Knowles emphasised that the growth of medical relief in India during the last fifty years was almost incredible; in no other country in the world had the rate of progress been more amazing; he considered that time and the growth of medical institutions would solve the problem. Travelling dispensaries had proved too costly and too inefficient. What should be aimed at was an Indian system of medicine with its own Pharmacopoeia based upon indigenous and cheap sources of supply, but incorporated in and part of the general worldwide system of scientific modern medicine.

In reply Major Chopra commented on the possibilities of re-creating the old 'hospital assistant' class. The meeting terminated at 8-10 P.M.

—◇—

APRIL, 1926.

A meeting of the Medical Section was held on Monday, the 12th, at 5-45 P.M.

PRESENT.

MAJOR H. W. ACTON, I.M.S., in the chair.

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Members:

Bhattacharjee, Dr. S. P.
Chatterji, Major K. K.
Harnett, Major W. L.
Knowles, Major R.
Mitter, Dr. B. P. D.
Ottens, Mr. N.
Stapleton, Miss Dr. G.

Visitors: 11.

The minutes of the last meeting having been confirmed and signed, Major H. W. Acton, I.M.S., then read a paper "On the principles in testing a cure."

The author commented on the frequency with which a given drug was 'tested' in two or three cases, and the results claimed to be a 'cure' in the medical journals. A disease which had many 'cures' was really a disease for which at present there was no true cure. Drugs could be classified as specific—such as the use of quinine in malaria—or empiric. Cure might be brought about by Nature, and then attributed to the drug employed. It might also be either permanent or temporary. The author then discussed the mechanism of spontaneous cures and the fallacies underlying the use of small statistics. Bias in favour of a remedy, the error of random sampling in a small population under treatment, and other factors all contributed to give supposed 'cures' a fictitious value. To take three cardinal instances; it could not be claimed that the introduction of antirabic treatment had appreciably lowered the yearly mortality from hydrophobia in India, for the total figures remained at about the same low level year in, year out. This was an instance of partial correlation, and the value of the 'cure' was very doubtful. In the case of snake bite, the natural chances of escape and of spontaneous recovery were so very great that any 'remedy' at all had every chance of establishing a reputation as a 'cure.' In the treatment of amoebic abscess of the liver by emetine, however, we had an example of a true cure. It had reduced the annual mortality from this disease among the British and Indian armies from a considerable figure to nearly nil. The author then commented on the statistical criteria which are necessary in truly adjudging the value of any cure.

An interesting discussion followed. Major R. Knowles commented on the fallacy of Ehrlich's grand idea of the *therapia sterilisans magna*. In theory a drug which, on the injection of a single dose, should kill all the bacteria or parasites in a patient's body was an ideal to be admired; in actual fact most drugs which were real cures only reduced the infection to such a level that the patient's natural powers of resistance were able to overcome the residual infection. Dr. C. L. Sansom, C.M.G., F.R.C.S., speaking as a medical administrator with many years of experience in the F.M.S., said that the errors of medical and vital statistics had been the bane of the whole of his official career. Major K. K. Chatterji said that nowhere were there more fallacious and vaunted 'cures' than in connection with

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venereal diseases. Dr. G. Panja commented on the possibilities of re-infection with the same disease when the cured patient returned to his home and to conditions under which he originally became infected.

After Major Acton had replied, the meeting terminated at 7-45 P.M.

—◇—

MAY, 1926.

A meeting of the Medical Section was held on Monday, the 10th, at 5-45 P.M.

PRESENT.

MAJOR H. W. ACTON, I.M.S., in the chair.

Members:

Bose, Dr. S. R.
Chatterji, Major K. K.
Chaudri, Dr. B. L.
Connor, Sir Frank.
Mitter, Dr. B. P. D.
Knowles, Major R.
Rao, Dr. G. R.
Ottens, Mr. N.
Shanks, Capt. G.
Stapleton, Miss Dr. G.

Visitors: 16.

After the minutes of the previous meeting had been confirmed and signed, Major K. K. Chatterji, F.R.C.S.I., read a paper on "The study of cancer in India," the paper being illustrated by lantern slides.

This paper was abstracted in the *Statesman* of the following day. It dealt largely with the author's experiences and observations during a tour in Europe, with the experimental production of cancer in animals, and with the types of cancerous lesions met with in India—the last point being very well illustrated in the set of lantern slides. The author then considered the special Indian aspects of the cancer question, the frequency of different types of cancer among Indians, and the different views held with regard to the aetiology of cancer.

The paper was discussed first by Major Acton. He said that a notable feature of medical work in India was that despite the fact that chronic ulcers and granulomatous growths were exceedingly common in India, a cancerous change in such growths was very rare. Capt. Shanks gave a valuable table of information of the incidence of different types of cancer among Indians as observed in the post-mortem room of the Calcutta Medical College. Sir Frank Connor noted the extreme rarity of cancerous degeneration of elephantoid growths, and Dr. Muir remarked that he had never seen cancer supervene on leprosy.

After Major Chatterji had replied, the meeting terminated at 7-15 P.M.

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JUNE, 1926.

A meeting of the Medical Section was held on Monday, the 14th, at 5-45 P.M.

PRESENT.

MAJOR H. W. ACTON, I.M.S., in the chair.

Members :

Bose, Dr. S. R.
Cooper, Mr. A.
Knowles, Major R.
Mitter, Dr. B. P. D.
Ottens, Mr. N.

Visitors : 6.

After confirmation of the minutes of the previous meeting, Major V. B. Green-Armytage, M.D , M.R.C.P., I.M.S., read a paper on "Obstetrics and gynæcology in the days of the patriarchs."

This paper presented an analysis and commentary on the obstetrical and gynæcological incidents recorded in the Bible. It was subsequently published in both the *British Empire Journal of Obstetrics* and the *Indian Medical Gazette*. The author also commented on the endocrine aspect of the scriptures, instancing Nimrod as a case of hyper-adrenalism, Goliath as one of hyper-pituitarism, and Jezebel as one of hyper-thyroidism. The birth stool which is referred to in the Book of Exodus can still be seen in rural parts of France and Germany to-day. The paper was discussed by Major Acton, who commented on the fact that the passages with regard to Esau being a hairy man probably indicated that he had a large hairy mole rather than that he was a case of hyper-thyroidism. He also discussed the relationship of sunlight to vitamines and rickets. In summing up the discussion, Major Green-Armytage contrasted the very great rarity of cancer of the cervix uteri among Jews, as compared with its frequency among the Hindus, and contrasted the caste rules with regard to sex matters among the two races.

SEPTEMBER, 1926.

A meeting of the Medical Section was held on Monday, the 20th, at 5 P.M.

PRESENT.

MAJOR H. W. ACTON, I.M.S., in the chair.

Members :

Bose, Dr. S. R.
Brahmachari, Dr. U. N.
Chaudri, Dr. B. N.
Connor, Sir Frank.
Knowles, Major R.
Mitter, Dr. B. P. D.
Stapleton, Miss Dr. G.

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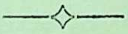
Visitors: 6.

After the minutes of the previous meeting had been confirmed, Major J. A. Shorten read a paper entitled "Radium and the cure of cancer; including an account of the visit to the Fondation Curie, Paris."

The author discussed the principles of the treatment of cancer by radium and dwelt upon the bad results which sometimes unexpectedly happen. He then gave a most interesting account of a visit paid to the Fondation Curie in Paris. The technique employed at that institute in dealing with cancer of different organs was described, and the dosage employed. The results are amazingly good, and are steadily improving with each year. He was shown for instance 15 cases of cancer of the tongue ranging in duration from 3 to 6 years, all of which had been apparently completely cured. The reason why radium so often fails to cure cancer lies in the action of the law of inverse squares; that the greater the distance of the radium from the cancerous tissue, the weaker its action. Hence at the Fondation Curie attempts are being made to obtain enormous doses of radium, and in one apparatus exposures of 60 to 70 hours to a mass of no less than 4 gms. of radium is possible.

The paper was discussed by Dr. Subodh Mitter, M.D., who had been using radium in Calcutta for four years, and gave an account of his results. Sir Frank Connor pleaded for the establishment of a Radium Institute in Calcutta, where it was very badly wanted. Major Shorten then replied, and the meeting terminated.



NOVEMBER, 1926.

A meeting of the Medical Section was held on Monday, the 22nd, at 6 P.M.

PRESENT.

MAJOR H. W. ACTON, I.M.S., in the chair.

Members:

Bhattacharyya, Dr. S. P.
Cooper, Mr. H.
Harnett, Lt.-Col. W. L.
Knowles, Major R.
Mitter, Dr. B. P. D.
Ottens, Mr. N.
Proctor, Lt.-Col. A. H.

Visitors: 18.

After the minutes of the previous meeting had been confirmed, Major H. W. Acton, I.M.S., read a paper on "Neurasthenia in the tropics; its aetiology, causation, and treatment."

This paper was subsequently published in the *Indian Medical Gazette*, and has been reviewed by many journals. The

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author condemned the practice of treating neurasthenic patients as if there was nothing wrong with them. Such patients were in real ill-health, and it behoved the doctor to try and analyse the causes which underlay that ill-health.

The exciting cause of tropical neurasthenia was essentially a depression in the function of certain endocrine glands. The functions of these glands might be depressed either by the action of the toxins of many of the acute diseases of the tropics, or by absorption of poisonous pressor bases from the intestine. A hot and humid climate, unsuitable clothing, a lack of ventilation from shutting up the house, the want of sufficiently nutritious food and lack of vitamines, were all predisposing causes in Calcutta. The patient passed first into a state of hypothyroidism, and later the adrenal function, and then that of the gonads became depressed. The sympathetic—and later the central nervous—systems then became depressed, and the patient passed into a listless and lethargic state. Having become conscious that he is really ill, but not knowing what the ill-health is due to, the patient passes into a state of introspection and worry. This still further depresses the endocrine system, and finally a condition of confirmed neurasthenia develops. Morbid anxiety, nervousness, excitability, and even the actual phobias next develop, and this class of patient makes the fortune of the seller of patent medicines.

In dealing with such patients, the first thing was to gain their complete confidence; to agree with them that they are ill; and to promise a systematic investigation. This should be very thorough. Exciting causes should be sought for and removed—it might be amoebic or bacillary ulceration of the intestine, or even a septic tooth. The predisposing causes should be removed. The diet must be especially enquired into, and a sufficiency of fresh vegetables and vitamines secured. The anaemia must be combated; whilst endocrine therapy is usually indicated to tone up the general depression. If only the doctor was to make a thorough enough examination of the case and deal one by one with all the exciting and contributory causes of the condition the result of treatment was often surprisingly good.

An interesting discussion followed Major Acton's paper. Major Knowles spoke of the frequency of what one might term 'visceral neurasthenia' among the European population of Calcutta. Major Green-Armytage dealt with sex aspects of neurasthenia; fear of child-bearing he considered to be a frequent cause of neurasthenia among European women in the tropics. Col. Harnett spoke of the importance of septic foci in inducing the condition, and of chronic prostatitis as a frequent contributory cause in the male. Dr. Panja noted the special frequency of chronic neurasthenia among Indian widows. Col. Proctor emphasised the importance of trauma and injuries—it might be,

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sustained several years previously—as a contributory cause. The discusssion was finally summed up by Major Acton, and what had been a most interesting meeting terminated at 7-50 P.M.

* * *

Whilst, in general, the Medical Section was well attended in 1926, the difficulties commented on in former reports still persist. There are too few members and too many visitors, and it would be as well to restrict the admission of visitors to those only who are invited to attend by a member. It is not easy to get the medical profession in Calcutta to attend medical meetings, whilst very few practising physicians or surgeons will take the trouble to write up a subject or prepare a paper for discussion. There is no end of interesting and important medical material for study in this country which is never properly studied or reported on for want of leisure or of inclination. The opportunities for interesting medical work in India are far greater than is the case in Great Britain, but the output of medical papers of merit in India is still deplorably low.

R. KNOWLES,
LIEUT.-COL., I.M.S.,
Medical Secretary.

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The Yogāvatāropadeśa: A Mahāyāna Treatise on Yoga by Dharmendra

in its Tibetan Version with Sanskrit Restoration and English Translation

By

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INTRODUCTORY.

The Yogāvatāropadeśa, Tib. *Rnal ḥbyor la ḥjug paḥi man ṅag*, is a short treatise on yoga of the Mahāyāna school. The Sanskrit original of this work has not as yet been found and seems to have been lost. But there are two translations in Tibetan as found in the Tanjur (Bstan-ḥgyur), Mdo, Ku, fols. 146ᵇ.1–147ᵇ.2, and Gi, fols. 204ᵃ.2—205ᵃ.4. They are identical, only with some minor differences of reading here and there.

As the colophon says, the author of the Yogāvatāropadeśa is Ācārya Dharmendra and it has been translated into Tibetan by the Indian Paṇḍita, Janārdana[1] in collaboration with a Tibetan interpreter named Bhikṣu Ratnabhadra (Lo-tsā-ba Dge-sloṅ Rin-chen-bzaṅ-po).

On the same subject and of the same school there is another work, viz. Yogāvatāra, Tib. *Rnal ḥbyor la ḥjug pa* of which also the Sanskrit original is lost. This is a small work containing only ten stanzas which appear to have been composed in the Āryā metre.

The Tanjur Index mentions the Yogāvatāra thrice: Mdo, A; Ku, fols. 145ᵇ.6–146ᵃ.8; and Gi, fols. 192ᵇ.8–193ᵇ.1. But the text is not available in A. The last two versions are almost alike.

From the colophon we come to know that it was composed by Diṅnāga and rendered into Tibetan by the Indian Paṇḍita Dharmaśrībhadra and the Tibetan interpreter Bhikṣu Ratnabhadra, the same person, who was the assistant of Janārdana in the translation of the Yogāvatāropadeśa into Tibetan.

It is very interesting to note that the entire Yogāvatāra excepting the last stanza has been incorporated in the Yogā-

[1] Wrongly transliterated into Tibetan as Jaratna in YAU¹ and Jaraddāna in YAU².

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vatāropadeśa without being mentioned as the work of a different author. It is, however, apparent that the latter work is an improved redaction of the former with some prefatory and concluding remarks in prose. The fact that the Yogāvatāropadeśa has taken the Yogāvatāra almost in its entirety without any mention of its name and author, clearly points to the popularity it earned.

Diṅnāga, the author of the Yogāvatāra, and the celebrated Buddhist teacher may be roughly placed in the fifth century A.D. So Dharmendra who bodily incorporated Diṅnāga's work in his own book was either contemporaneous with or posterior to Diṅnāga.

The Yogāvatāropadeśa is very sententious in its treatment of the subject matter and merely touches upon the several stages that an aspirant is to go through till prajñāpāramitā is obtained. A devoted and enthusiastic student of yoga should approach his preceptor in the prescribed manner and meditate upon the teachings imparted to him. He is further required to study the important scriptures, and, after having determined the nature of the ultimate truth, to apply himself to yoga in right earnest. Much emphasis is laid upon the necessity of controlling the outgoings of the mind, which, when fully effected, is followed by supernatural faculties, and the yogin is then in a position to do immense good to the world. The Yogāvatāropadeśa enjoins that any intricate problem concerning yoga is to be known orally from the preceptor, and thus shows that there is an esoteric aspect of the yoga doctrines which can be interpreted by no mere study of books, but by the words of the preceptor. It concludes with a sentiment quoted from the Buddha that those who take recourse to books alone disregarding the prescribed rules sadly fail in their purpose and come to utter grief.

In editing the text of the Yogāvatāropadeśa I have made use of the four xylographs mentioned below as existing in the Tanjur of the Viśvabhāratī Library: viz. two of the Yogāvatāropadeśa and two of the Yogāvatāra. Wherever there is any difference of reading I have accepted that which appears to be the most suitable and have shown the variants in the footnotes. I have also attempted to restore the Sanskrit original from the Tibetan version.

Xylographs Collated.

1. YAU^1=Mdo, Ku, fols. 146^b.1 – 147^b.2.
2. YAU^2=Mdo, Gi, fols. 204^a.2 – 205^a.4.
3. YA^1 =Mdo, Ku, fols. 145^b.6 – 146^a.8.
4. YA^2 =Mdo, Gi, fols. 192^b.8 – 193^b.1.

The references to folios are according to Cordier.

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༄༅། རྒྱ་གར་སྐད་དུ། ཡོ་གཱ་བ་ཏཱ་རོ་པ་དེ་ཤ།།
བོད་སྐད་དུ། རྣལ་འབྱོར་ལ་འཇུག་པའི་མན་ངག །།

༄༅། རྗེ་བཙུན་བླ་མ་རྣམས་[1]ལ་ཕྱག་འཚལ་ལོ།
ཐམས་ཅད་མཁྱེན་པ་ལ་ཕྱག་འཚལ་ལོ།

དེ་ནི་ཐེག་པ་ཆེན་པོ་ལ་ལྷག་པར་མོས་པའི་དད་པ་ཅན་[2]རིགས་ཀྱི་བུས་གསོལ་བ་བཏབ་པ་ངག་ལ་སྤྲོ་བ་བསྐྱེད་ཅིང་ཐར་པ་མ་ལུས་པ་འདོད་པ་ལ[3]། སྔར་བཤད་པའི་མཚན་ཉིད་ཅན་གྱི་ཡེ་ཤེས་རྟོགས་པར་བྱ་བའི་[4]ཕྱིར་ཐམས་ཅད་ཐབས་ཉེ་བར་བསྟན་པས། བདག་དང་གཞན་གྱི་དོན་རབ་ཏུ་འགྲུབ་པར་བྱ་བའི་ཕྱིར་ཤེས་རབ་ཀྱི་ཚུལ་རྗེས་སུ་དྲན་ནས[5]། དེ་བསྟན་པའི་མན་ངག་བསྒོམ་པའི་རིམ་པའི་ཆོ་ག་འདིར་ཆུང་ཟད་ཅིག་བཤད་པར་བྱའོ། ཐེག་པ་ཆེན་པོར་ཇི་སྐད་དུ་བཤད་པའི་ཡེ་ཤེས་མངོན་པར་རྟོགས་པར་འདོད་པས[6]། དད་པ་དང་གུས་པ་དང་ལྡན་པས[7]། དེའི་ཚུལ་ལས་བཤད་པའི་ཆོ་གའི་རིམ་པ་སྔོན་དུ་འགྲོ་བས་བླ་མ་ལ་གསོལ་བ་བཏབ་སྟེ། དེའི་དྲིན་གྱིས་[8]ཐོབ་པའི་ལུང་གི་[9]བླ་ན་མེད་པའི་ཡེ་ཤེས་ཀྱི་ཐབས་ཀྱི་[10]མན་ངག་གི་རྣལ་འབྱོར་བསྒོམ་[11]པ་བརྩམ་པར་བྱའོ།། དེ་ལ་དང་པོར་[12]རེ་ཞིག།

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[1] YAU² རྣམ་པ. [2] YAU² adds གྱི after ཅན.
[3] YAU² no ཆིག་ཤད or stop here.
[4] After བའི་ YAU¹ ཐབས་ཉོ་; YAU² ཕྱིར་ཐམས་ཅད་ཉོ་.
[5] YAU² no ཆིག་ཤད.
[6] YAU² པ for པས; no ཆིག་ཤད after པས, but after དད་པ་ཅན.
[7] YAU² no ཆིག་ཤད. [8] YAU¹ གྱི. [9] YAU² གིས.
[10] YAU² ཀྱིས. [11] YAU¹ བསྒོམས. [12] YAU¹ པོ.

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I.

བསྟན་བཅོས་རྒྱ་ཆེན་པོ་ནི་ཐོས་ནས་སུ།
དོན་དམ་དེ་བཞིན་ཉིད་ནི་ངེས་བྱས་ལ།
དད་ལྡན་དེ་ནི་འཇམ་པའི་སྟན་གནས་ཏེ[1]།
བློ་དང་ལྡན་པས་རྣལ་འབྱོར་བརྩོན་བར་བྱ།།

II.

གཟུང་དང་འཛིན་དང་གཉིས་ཀ་གཉིས་[2]མིན་དང་།
བདག་དང་གཞན་དང་མྱ་ངན་འདས་པ་དང་།
འཁོར་བ་ཞེས་བྱའི་རྣམ་རྟོག་མང་པོ་ནི།
རབ་[3]ཏུ་བཏང་ལ་ཡིད[4]་ནི་[5]མཉམ་པ་བཞག[6]།།

III.

སྒྱུ་མ་དྲི་ཟའི་གྲོང་ཁྱེར་ལྟ་བུར་ནི།
ཤེས་བྱ་མ་ལུས་རྣམ་པར་བལྟས་ནས་སུ།
[7]དེ་བཞིན་ཉིད་ཀྱི་ཡེ་ཤེས་རྡོ་རྗེ་ཡི[8]།
ལུས་ཀྱི་འཁྲུལ་འཁོར་རབ་ཏུ་གཞིག་བར་བྱ།།

IV.

རྣམ་པ་ཐམས་ཅད་དུ་ནི་རབ་མཛེས་ལ།
ཐོག་དང་ཐ་མའི་ཆ་བྲལ་རྣམ་[9]མི་རྟོག།

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1 YAU² དེ. 2 YA¹ གཉི་ག.

3 YA¹, YA² རྟག་ཏུ་སྤངས for རབ་ཏུ་བཏང. 4 YA² ཡང for ཡིད.

5 YA¹ ཀྱི, YA² ན for ནི. 6 YA¹ གཞོག.

7 The last two lines of this śloka and the whole of the next are omitted in YA².

8 YAU² ཡིད. 9 YAU¹ རྣམས.

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དྲི་མ་མེད་པའི་འོད་ཟེར་སྟོང་གིས་ནི།
མུན་པ་ངེས་གསལ་མཁའ་དང་མཚུངས་[1]པ་ཡིན།།

V.

རང་གི་སྣང་[2]བ་[3]ཙམ་གྱི་ངོ་བོ་རུ།
གཟོད་ནས་སྐྱེ་བ་མེད་པའི་རང་སེམས་མཐོང་།
གང་གིས་ཀྱང་ནི་དེ་མཐོང་གྱུར་པ་དག།
དེ་ཡང་དེ་བཞིན་དུ་ནི་བལྟ་[4]བར་བྱ།།

VI.

དམིགས་པ་མེད་དང་བཅས་པའི་སེམས་ཉིད་ནི།
དེ་བཞིན་ཉིད་དང་ཡང་དག་མཐའ་རུ་བཤད།
དེ་ལྟར་རིམ་གྱིས་བསླབ་[5]པར་གྱུར་པ་ལས[6]།
མིང་དུ་འདུ་[7]ཤེས་འགོག་པ་ཐོབ་པར་འགྱུར།།

VII.

དེ་ལ་[8]ཡང་དག་རེག་པར་སྦྱོར་བ་ལས།
འབད་པ་མེད་པར་མངོན་ཤེས་ལྔ་རུ་[9]འགྱུར།
དེ་དང་མངོན་པར་ལྡན་པའི་རྣལ་འབྱོར་པ[10]།
འགྲོ་བའི་དོན་ནི་དཔག་ཏུ་མེད་[11]པ་བྱེད།།

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1 YAU1 མཚུང. 2 YA2, YAU1, YAU2 རྣམ. 3 YA2 པར.
4 YAU1, YAU2 ལྟ་ for བལྟ. 5 YAU2, YA1, YA2 བསླབས.
6 YAU1 ལ. 7 YA1 ཤེས་པ, YA2 ཐོས་པ་ for འདུ་ཤེས.
8 YAU1, YAU2 ལས. 9 YAU1, YAU2 ལྡན.
10 YA2 པས. 11 YA1 པར.

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VIII.

འདི་ནི་ཡོངས་སུ་རྫོགས་པའི་རྣལ་འབྱོར་པ།
ཤིན་དུ་ཡུན་རིང་དུས་སུ་གནས་པར་འགྱུར།
ལུས་ནི་རྡོ་རྗེ་ལྟ་བུར་མི་ཤིགས་ཤིང་།
ཉོན་མོངས་བདུད་ལ་སོགས་པས་གཡོ་མི་འགྱུར།།

IX.

ཤེས་རབ་ཕ་རོལ་ཕྱིན་པ་ཞེས་བྱ་ཡི[1]།
རྣལ་འབྱོར་འདི་དང་རྟག་ཏུ་རབ་ལྡན་པ།
ནམཁའ་མཛོད་[2]ལ་སོགས་པའི་ཏིང་ངེ་འཛིན།
མང་པོ་རྣམས་ནི་ཡང་དག་རྫོགས་པར་འགྱུར[3]།།

འདི་ལྟར་ཟབ་མོ་འི་དོན་གང་ཅི་ཡང་རུང་བ་རྟོགས་པར་དཀའ་བ་དེ་ནི་བླ་མའི་ཞལ་ནས་ཚོ་ག་ཇི་ལྟ་བ་བཞིན་དུ་བཤད་པ་[4]བཟུང་བར་བྱའོ། རིགས་ཀྱི་བུ་འམ་རིགས་ཀྱི་བུ་མོ་དད་ཕ་དང་ལྡན་པ་[5]གང་ལ་ལ་[6]ཕ་རོལ་ཏུ་ཕྱིན་པའི་ཚུལ་གྱིས་སྦྱང་བ་སྤྱོད་དོ[7]། ཇི་སྐད་དུ་བཤད་པའི་རིམ་པའི་ཚོ་གས་སེམས་ཅན་ཐམས་ཅད་གདོན་པར་བྱ་པའི་ཕྱིར། སེམས་བསྐྱེད་ནས་བླ་ན་མེད་པའི་ཡེ་ཤེས་ཀྱིས། མན་ངག་གི་རྣལ་འབྱོར་བརྩམས་

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[1] YAU[2], YA[2] པའི. [2] YAU[1] འདོད.

[3] After this both YA[1] and YA[2] add the following śloka:

བདག་གི་རྣལ་འབྱོར་ལ་ནི་འཇུག་པ་ཙམ།
ཡང་དག་སྦྱར་བས་དགེ་བ་གང་བསགས་པ།
དེས་ནི་འགྲོ་བ་ཐམས་ཅད་རབ་མྱུར་བར།
ཐམས་ཅད་མཁྱེན་པའི་ཡེ་ཤེས་ཐོབ་པར་ཤོག།།

In *a* YA[1] གིས for གི. [4] YAU[2] པར.

[5] YAU[1] པས. [6] YAU[2] ལས. [7] YAU[2] པས for དོ.

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ནས། བརྩོན་འགྲུས་འབར་བ་དང་ལྡན་པས་བསླབས་པའི་སྟོབས་དང་ལྡན་པ་དེ་[1]ནི་རིང་པོ་[2]མི་ཐོགས་པར་ཚེ་[3]ཉིད་ལ་ཇི་སྐད་དུ་བཤད་པའི་ཡེ་ཤེས་ཐོབ་པར་འགྱུར་རོ། གང་[4]ཡང་ཇི་སྐད་དུ་བཤད་པའི་ཚེ་ག་མེད་པར་གླེགས་བམ་ལ་བརྟེན་པ་ཙམ་གྱིས་འཇུག་པ་དེ་དག་ནི་[5]ཇི་སྐད་དུ་བཤད་པའི་དངོས་གྲུབ་ལ་རྒྱབ་ཀྱིས་[6]ཕྱོགས་པར་འགྱུར་ཞིང་། སྡུག་བསྔལ་བ་དང་ཡིད་མི་བདེ་བ་སྣ་ཚོགས་འབྱུང་བར་འགྱུར་རོ་ཞེས་ཟབ་མོ་འི་ཚུལ་ལས་དེ་བཞིན་གཤེགས་པས་གསུངས་སོ།།

རྣལ་འབྱོར་ལ་འཇུག་པའི་མན་ངག་སློབ་དཔོན་ཆོས་ཀྱི་དཔང་པོས་མཛད་པ་རྫོགས་སོ།། །རྒྱ་གར་གྱི་མཁན་པོ་ཛ་ར་དྷ་[7]དང་། ཞུ་ཆེན་གྱི་ལོ་ཙཱ་བ་དགེ་སློང་རིན་ཆེན་བཟང་པོས་བསྒྱུར་ཅིང་ཞུས་ཏེ་གཏན་ལ་ཕབ་པའོ།།

THE RECONSTRUCTED TEXT IN SANSKRIT.

योगावतारोपदेशः ।

भारतभाषायां योगावतारोपदेशः ॥

भोटभाषायां र्नल् 'ब्योर् ल 'जुग् प'इ मन् ङग् ॥

गुरुभट्टारकेभ्यो नमः ।

सर्वज्ञाय नमः ।

महायानाधिमुक्तस्य श्राद्धस्य कुलपुत्त्रस्य प्रार्थनाजनितोत्साहस्य निःशेषमोक्षकामस्य पूर्वोक्त[1]लक्षणावबोधाय सर्वोपायोपदेशेन स्वपरार्थ-

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[1] YAU[2] དེས. [2] YAU[2] པོར. [3] YAU[2] འདི after ཚེ.
[4] YAU[2] omits གང. [5] YAU[1] ཆིག་ཤད after ནི. [6] YAU[1] ཀྱི.
[7] For ཛ་ར་དྷ་ YAU[2] ཛ་ར་དྷ་ན.

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सुसिद्धये प्रज्ञाक्रममनुस्मृत्य तच्छासनोपदेशभावनाक्रमविधिरिह किञ्चिद् वक्तव्यः। महायाने यथोक्तज्ञानाभिसमयकामः आद्धस्तद्विधानोक्तविधिक्रमपूर्वकं गुरोः प्रार्थनां स्थापयित्वा तत्करुणाधिगतागमानुत्तरज्ञानोपायोपदेशयोगभावनामारभेत।

तत्र प्रथमं तावत्—

(१)

शास्त्रं प्रथितं श्रुत्वा निश्चित्यापि परमार्थतत्त्वानि।
श्रद्धायुक्तः प्राज्ञो योगं महायाने युञ्जीत॥

(२)

संसारो निर्वाणं स्वपरौ द्वयमद्वयं तथा ग्राह्यम्।
ग्राहक इति च विकल्पांस्त्यक्त्वा चित्तं समापन्नम्॥

(३)

मायागन्धर्वनगरसदृशं ज्ञेयं विलोक्य निःशेषम्।
तथताज्ञानाग्निना शरीरयन्त्रं परीक्षेत॥

(४)

आद्यन्तांशरहितमविकल्पं सर्वप्रकारवरशोभम्।
विमलमरीचिसहस्रैरपाकृततमिस्रगगनसंकाशम्॥

(५)

स्वाभासमात्ररूपं पश्येत् प्रथमादजं स्वचित्तं च।
येन च दृश्यत एतद् द्रष्टव्यं तदपि हि तथैव॥

(६)

कथितमनालम्बं चित्तमेव तथता च भूतकोटि[2]श्च।
ईदृक्क्रमशिक्षातो संज्ञावेदितनिरोध[3]लाभः स्यात्॥

(७)

तस्मिन् सम्यक्स्पर्शात् पञ्चाभिज्ञा[4] भवन्त्यनायासम्।
तदभिव्यक्तो योगी जगदर्थं साधयत्यपरिमेयम्॥

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(८)

परिसम्पन्नो योगी तिष्ठति कालं सुदीर्घमप्येषः ।
तनुरशनिरिवाशिथिला निश्चेष्टा क्लेशमारा[5]द्याः ॥

(९)

प्रज्ञापारमिता[6]या एते योगा सदा समुत्कृष्टाः ।
बहवो हि गगनगङ्गा[7]द्याः सम्पन्नाः समाधयः सन्ति ॥*

एवं यः कश्चिद् युक्तो दुरवगमो गम्भीरोऽर्थः स गुरुमुखाद् यथावदुक्तो ग्राह्यः । यः कश्चित् कुलपुत्रो वा कुलदुहिता वा श्राद्धः शीलपारमित[8]या धूतचारित्रः, स यथोक्तक्रमविधिना सर्वे सत्त्वा मोचनीया इति चित्तमुत्पाद्यानुत्तरज्ञानेन योगोपदेशमारभ्य वीर्योद्दीप्तः शिक्षाबलश्चिरमप्रतिहतोऽस्मिन्नेव जन्मनि यथोक्तज्ञानं लभते । ये तु यथोक्तविधिमन्तरेण पुस्तकाश्रयमात्रेण प्रवर्त्तन्ते ते यथोक्तसिद्धिपराङ्मुखा भवन्ति तेषां विविधदुःखदौर्मनस्यं चोद्भवतीत्युक्तं तथागतेन गम्भीरशीले[9] ।

योगावतारोपदेशो धर्मेन्द्रकृतः सम्पूर्णः । भारतीयोपाध्यायेन जनार्दनेन महाशोधकेन भिक्षुणा रत्नभद्रेण च परिवर्त्य शोधयित्वा निर्णीतः ॥

ENGLISH TRANSLATION.

In the Indian language Yogāvatāropadeśa. In the Tibetan language Rnal ḥbyor la ḥjug paḥi man ṅag.

Obeisance to the Adorable Teachers.

Obeisance to the Omniscient One.

Here is told in brief the order of the processes of meditation upon the teaching of the doctrines consistent with the different stages of wisdom for the full attainment of all desired objects both of one's own self and of others. Such attainment results from the instructions as to the means of comprehending the aforesaid knowledge by a devoted and noble youth inclined to the Mahāyāna, energetic on account of his prayers, and desirous of absolute emancipation. A devoted person desiring

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* The following is here an additional stanza as found in YA[1] and YA[2]:

योगावतारमात्रे सम्यग्योगाचितं शुभं मे यत् ।
लभतां तेन त्वरितं सर्वज्ञत्वं जगत् सर्वम् ॥

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full comprehension of the knowledge as taught in the Mahāyāna should offer prayers to his preceptor in the prescribed manner and begin the meditation of yoga by following the instructions regarding the ways of attaining the supreme knowledge of the sacred lore as obtained through his preceptor's kindness. Here at the outset—

1. Having listened to the well-known scriptures and determined the principles of the supreme truth, a wise person should with devotion practise yoga on a soft seat.

2. Transmigration and emancipation, self and not-self, duality and non-duality, knower and knowable,—foregoing these imaginations the mind becomes concentrated.

3. Looking upon the whole knowable as a trick of jugglery or as the city of the celestial choir, one should test one's bodily mechanism by means of the thunderbolt of tathatājñāna (in order to ascertain whether there is anything real in it).

4-5. Devoid of beginning or end or part, as well as of imaginations, beautified with the splendid graces of every kind, and like the sky wherefrom darkness has been dispelled by thousands of bright rays—from the beginning thus should one view one's mind as unborn and as having the form of its own reflections. That also by means of which such knowledge comes is to be viewed likewise.

6. Mind without an object of thought is called tathatā and bhūtakoṭi. From a gradual training of this kind comes the cessation of consciousness and sensation.

7. From a right contact with that arise the five supernatural faculties without any difficulty. The yogin thus illumined does immense good to the world.

8. The perfected yogin long remains so and his body becomes strong like thunderbolt and kleśamāra and others become quiescent.

9. These yogas of prajñāpāramitā are always excellent. Many are the samādhis like gaganagañja.[1]

Now any subject that is appropriate, profound and not easily comprehensible should be learnt orally from the teacher. Any devoted and noble young man or woman whose character has been purified by śīlapāramitā and who thinks in his or her mind that all beings are to be liberated in accordance with the prescribed manner and begins to act upon the teachings of yoga by means of the supreme knowledge, obtains the said knowledge in this very life, being fired with enthusiasm, strong through discipline and ever irresistible. "Those who have recourse to books only, foregoing the prescribed process,

[1] The additional stanza as found in YA[1] and YA[2] can be thus translated. Through the merits that have accrued to me from right application to the Yogāvatāra, let the whole world attain to omniscience without delay.

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fail to obtain success and to them come various miseries and mortifications"—this was said by Tathāgatā in the Gambhīraśīla.

Here ends the Yogāvatāropadeśa of Dharmendra. It is translated, revised and ascertained by the Indian teacher Janārdana and the great revisor Bhikṣu Ratnabhadra.

NOTES ON THE SANSKRIT RECONSTRUCTION.

1. पूर्वोक्त. I could not ascertain what the author refers to by the word *pūrvokta-*.

2. तथता भूतकोटि. These two words which are synonymous are used in the Buddhist philosophy to denote the ultimate truth that the whole of the visible world, all phenomena have no reality (niḥsvabhāvatā).

3. संज्ञावेदितनिरोध. In Pali सञ्ञावेदयितनिरोध. It is the final stage of Arūpa meditation when not only sensation or consciousness but also all the mental properties (चेतसिका धम्मा) headed by contact (फस्स, Skt. स्पर्श) together with the mind itself are suppressed.

4. पंच अभिज्ञा. The five supernatural faculties, viz. 1. Divine sight (दिव्यचक्षुः), 2. Divine hearing (दिव्यश्रोत्र), 3. Knowledge of other's thoughts (परचित्तज्ञान), 4. Memory of former abodes (पूर्वनिवासानुस्मृति), and 5. Magical science (ऋद्धि). Sometimes a sixth is added, viz., the knowledge how to destroy human passion (आस्रवक्षयकर ज्ञान).

5. क्लेशमार. *Kleśa* or original sin is the evil principle, the *māra* or hindrance to the attainment of *nirvāṇa*. See *Childers' Pali Dictionary*, p. 241.

6. प्रज्ञापारमिता. Perfection of wisdom.

7. गगनगञ्ज. The name of a particular kind of samādhi. See *Dharmasaṃgraha, CXXXVI.*

8. शीलपारमिता. The transcendental virtue of morality. One of the ten *pāramitās*.

9. गम्भीरशील. It seems to be the name of a book.

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The Hindu Method of testing Arithmetical Operations.

By BIBHUTIBHUSAN DATTA, (*University College of Science, Calcutta*).

Introductory.

It was Taylor who first stated in 1816 A.D., that the Hindus did not know the method of testing arithmetical operations by casting out the nines.[1] That statement was repeated in 1907 A.D. by Kaye in a slightly modified form. "There is not the remotest reference," says Kaye, "to any such rules or anything akin to them in any of the known writings of the Hindu mathematicians prior to Avicenna."[2] Neither the original statement, nor its modification is correct. For the method of verification by casting out the nines does certainly occur in a Hindu mathematical treatise of the 10th century. It is the *Mahā-Ārya-siddhānta*, or in short the *Mahā-siddhānta*.[3] Its author, Āryabhaṭa II (*c.* 950 A.D.) lived prior to the time of Avicenna (980–1037 A.D.).[4] This method is not found, nor any other similar method is found, in any of the known Sanskrit mathematical works. These facts were pointed out in 1910 A.D. by Sudhakara Dvivedi in the synopsis of the contents published in his edition of the *Mahā-siddhānta*. But the subsequent writers have entirely ignored him. And inspite of the efforts of this scholar to dispel the mistaken assertions of the previous writers, Kaye re-asserted in 1915 A.D. that the proof by nine does not appear in any Hindu work before the 12th century[5] and his mis-statement has been repeated by some of the modern historians of mathematics.[6] The present

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[1] J. Taylor, *Lilawati*, Bombay, 1816, Introduction, pp. 7, 10.

[2] G. R. Kaye, "Notes on Indian Mathematics—Arithmetic Notation," *Journ. Asiat. Soc. Bengal*, III, 1907, p. 490.

[3] *Mahā-siddhānta*, ed. Sudhakara Dvivedi, Benares, 1910, ch. xviii, verses 67–70.

[4] There is a bit of uncertainty about the exact time of Āryabhaṭa II. There is no doubt that he lived before Bhāskara (born 1114 A.D.) who has referred to him. Sankar Balkrishna Dikshit, Sewell and others have put his date about 950 A.D. And this date has not been disputed by Kaye or any one else.

[5] G. R. Kaye, *Indian Mathematics*, Calcutta, 1915, p. 34.

[6] *Vide* David Eugene Smith, *History of Mathematics*, vol. II, Boston, 1925, p. 152; Florian Cajori, *History of Mathematics*, 2nd ed., New York, 1922, p. 91. These writers have been admittedly influenced by the writing of Kaye. Professor Smith, however, still believes in the Hindu origin of the proof by nine; and in an earlier work, Professor Cajori also expressed in favour of the Hindus. (*History of Elementary Mathematics*, New York, 1905, p. 96.)

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paper aims at correcting these wrong statements and at a discussion of the undecided question of the origin of the method of checking results by casting out the 9's, as also the probable indebtedness of the Hindus and the Arabs to each other for this method, with a view to reopen them. It should be pointed out that there are certain other historians, such as Cantor,[1] Paul Tannery,[2] Fink,[3] and Heath,[4] who believe that the Hindus discovered the proof by nine.

Hindu Method of Proof.

Āryabhaṭa II (*c.* 950 A.D.) says:

"Add together the own digits of the numbers forming the multiplicand, multiplier, and product up to one place,[5] such should be done with the dividend, divisor, quotient and remainder, etc. Then if the number (of one digit) resulting from the multiplication of the numbers obtained from the multiplier and the multiplicand be equal to the number obtained from the product, the multiplication is correct. If the number which results from the product of the numbers obtained from the quotient and the divisor plus the remainder, be equal to that obtained from the dividend, the operation is correct. Add together the digits of a number, its (nearest) square root (in integers) and of the remainder. If the number obtained from the square of the number obtained from the square root plus the number obtained from the remainder, be equal to the number resulting from the given number, the root-extraction is correct. If the number resulting from the cube of the number obtained by adding the digits of the cube root, plus the number obtained from the remainder, be equal to the number resulting from a given number, then the operation is right. Such are the easy tests of correctness (*śodhanikā*) of multiplication, etc," (*Mahā-siddhanta*, xviii. 67–70).[6]

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1 M. Cantor, *Geschichte der Mathematik*, Bd. I, Leipzig, 1907, p. 763.

2 Paul Tannery, *Mémoires Scientifiques*, t. I, Paris, 1912, p. 185.

3 Karl Fink, *Brief History of Mathematics*, translated into English by W. W. Beman and D. E. Smith, Chicago, 1910, p. 35.

4 T. Heath, *History of Greek Mathematics*, Oxford, 1921; vol. I, p. 117 and vol. II, p. 549.

5 That is, the digits of the number should be added together; the digits of the sum thus obtained should be again added and the process should be continued until there remains a number of one digit only.

6 गुण्यगुणकगुणनभुवां राशीनां स्वाङ्कयोगकः कार्यः ।
क-स्थानन्तस्तद्वद्भाज्यच्छेदाप्तिशेषकादीनाम् ॥ ६७ ॥
तद्गुण्यगुणकहतियुतितुल्ये गुणनोद्भवे स्फुटं गुणनम् ।
स्वाप्तिच्छेदकघाते शेषयुते यो भवेद्भङ्गः ॥ ६८ ॥
तेन समाने भाज्ये स्यष्टं लब्धं तथा शेषम् ।
वर्गैक्ये पदयुतिकृतिशेषैक्यसमे स्फुटौ स्वपदवर्गौ ॥ ६९ ॥

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The *rationale* of the above rules will be understood from the following:

Let

$$n = d_m \; d_{m-1} \cdots d_2 \; d_1$$

be a number of m *digits* written in the decimal place value notation. Let $S(n)$ denote the sum of its digits, $S^{(2)}{}_{(n)}$ the sum of the digits of $S(n)$ and so on.

Now $$n = d_1 + 10d_2 + 10^2 d_3 + \ldots + 10^{m-1} d_m,$$

$$S(n) = d_1 + d_2 + d_3 + \ldots + d_m.$$

Therefore $$n - S(n) = 9(d_2 + 11d_3 + \ldots \quad),$$

Whence $$n \equiv S(n) \pmod 9.$$

Similarly $$S(n) \equiv S^{(2)}(n) \pmod 9.$$

. . . . . .

Let $$S^{(k-1)}{}_{(n)} \equiv S^{(k)}{}_{(n)} \pmod 9.$$

be the last possible relation of this kind, so that $S^{(k)}{}_{(n)}$ will be a number of *one* digit, say n', which is certainly less than or equal to 9.

Adding the congruences, we obtain

$$n \equiv n' \pmod 9.$$

Thus the number of one digit obtained by adding the digits of a number repeatedly, is equal to the remainder obtained by dividing the given number by 9.

घनयोगसमे घनपदयोगघनैक्ये सशेषके तौ च।
एवं गुणनादीनां शोधनिकेयं सुखोपायात् ॥ ७० ॥

By way of illustration, take the number 746143625. Its nearest square root in integers is 27315 and the remainder is 34400; the nearest cube root is 907 and the remainder is 982. Now adding the digits of all these numbers repeatedly, we get

$7+4+6+1+4+3+6+2+5=38,\ 3+8=11,\ 1+1=2;$
$2+7+3+1+5=18,\ 1+8=9;$
$3+4+4+0+0=11,\ 1+1=2;$
$9+0+7=16,\ 1+6=7;$
$9+8+2=19,\ 1+9=10,\ 1+0=1.$

Then (square root) ^{2} + remainder $= 9^2 + 2 = 83.$

Now adding the digits of this number we get

$$8+3=11,\ 1+1=2$$

which is the number obtained out of the given number; hence the square root and remainder are correct.

Again (cube root) ^{3} + remainder $= 7^3 + 1 = 344$

Adding the digits of this number

$$3+4+4=11,\ 1+1=2;$$

so that the cube root and remainder are also correctly obtained.

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Now if there be a number N which is equal to the continued product of p other *numbers* $n_1, n_2, \ldots, n_p$, plus or minus another number R, then we write

$$N = n_1 n_2 \ldots n_p \pm R.$$

Now, let $n_1 \equiv n'_1 \pmod 9$.

$n_2 \equiv n'_2 \pmod 9$.

.....

$n_{(p)} \equiv n'_{(p)} \pmod 9$.

Multiplying the congruences, we obtain

$$n_1 n_2 \ldots n_{(p)} \equiv n'_1 n'_2 \ldots n'_{(p)} \pmod 9.$$

Further let $R \equiv r' \pmod 9$.

Therefore $n_1 n_2 \ldots n_p \pm R \equiv n'_1 n'_2 \ldots n'_p \pm r' \pmod 9$.

Hence $N \equiv n'_1 n'_2 \ldots n'_p \pm r' \pmod 9$.

In particular, if

$$n_1 = n_2 = \ldots = n_p = n, \text{ say}$$

Then will be $n'_1 = n'_2 = \ldots = n'_p = n'$, say

Therefore $N = n^p \pm R$

and $N \equiv n'^p \pm r' \pmod 9$.

From the above will easily follow the rules formulated in the *Mahā-siddhānta*.

Arabic Method.

The method of proof by casting out the 9's is found in the works of various Arab mathematicians from Al-Khowârîzmî (*c* 825 A.D.) onwards. It is called *tarazu* or balance in Arabic. The early writers confined themselves to the application of the test to the verification of Doubling and Multiplication only. It came into general use in the 11th century, largely due to the influence of Avicenna (*c.* 1020 A.D.), Al-Kharkhi (*c.* 1020 A.D.) and Al-Nasâwi (*c.* 1030 A.D.), when it was applied to all the four cardinal arithmetical operations together with the square and cube roots. "Regarding the verification of squares," says Avicenna, "according to the Hindu method (*fi al-tarik al-hindasi*), there is invariably 1 or 4 or 7 or 9. Now to 1 corresponds 1 or 8; to 4, 2 or 7; to 7, 4 or 5; and if it is 9, there will be 3 or 6 or 9."[1] That is a property of all the

[1] F. Wœpcke, "Mémoire sur la propagation des chiffres Indiens," *Journal Asiatique*, Series 6, tome 1, 1863, pp. 500 et sq.

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square numbers is that, to the modulus of 9, they must be equivalent to 1 or 4 or 7 or 9. Further, if a number, when divided by 9, leaves 1 as remainder, the square root of that number, when divided by 9, will leave 1 or 8 as remainder. If a number when divided by 9, leaves 4 as remainder, its square root, divided by 9, will leave 2 or 7 as remainder. If a number, divided by 9, leaves 7 as remainder, its square root, divided by 9, will leave 4 or 5 as remainder. If a number, divided by 9, leaves 9 (that is zero) as remainder, its square root, divided by 9, will leave 3 or 6 or 9 as remainder.[1] Avicenna has similar rules for the verification of the cube roots. "A property of the cubes," says he, "consists in that,—as the means of verification according to the manner of operation of the Hindu arithmetic (*al-hisâb al-hindasi*), I take the proof that is employed in this calculation,—it is always 1 or 8 or 9. If it is 1, the units of the number that is elevated to the cube are 1 or 4 or 7; if it is 8, they are 2 or 5 or 8; if it is 9, they are 3 or 6 or 9." In the 13th century the Arab mathematicians devised checks by other numbers besides 9, but none of them came into common use.[2]

Comparison.

It will be found on comparison that the Hindu and the early Arab methods of checking the results of fundamental operations of Arithmetic, are the same for all practical purposes, though the intervening steps in the process are different. Both are, in fact, "proof by nine." For as has been already pointed out the number of one digit required to be obtained in the Hindu method by the repeated addition of the digits of any given number is equivalent to the remainder when the given number is divided by 9. They also differ in certain other notable features. The Arabs formulated their rules with a view to the verification of the *powers*—(of course the second and the third powers only)—of a given number, whereas the Hindu rules had in view the reverse operation, that is, extraction of *roots*. Looked from the point of view of similar operations, it is obvious that the Arab rules can be useful in case of those numbers which are *perfect* squares or cubes, whereas the Hindu rules will be equally available in case of *imperfect* squares and cubes also. Similarly for the division. The early Arabs applied the check by casting out the 9's to division without a remainder. The Hindus had rules for testing all kinds of division whether with or without a remainder. Hence in all respects the Hindu rules are more complete and general than the Arab rules.

[1] Note that Avicenna avoids speaking of the zero as remainder; in those cases he takes the remainder to be 9.

[2] D. E. Smith, loc. cit, p. 154.

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Indeed the early Arabs seem to have been ignorant of the process of verification of the imperfect square and cube numbers and also of division when there is a remainder. Maximus Planudes (lived probably about 1260–1310 A.D.) who stated "the proof by nine" to be of Indian origin, but who derived his knowledge of it from the Arab intermediaries, does not apply the test to cases of division with a remainder.[1] In the later Arab mathematical works, *e.g.*, in the *Kholâsat al-hisâb* of Behā Eddin (*c.* 1600 A.D.),[2] the proof is stated in as general a way as in the *Mahā-siddhānta*. Again the Arabic rules, at least in the forms into which they have been put by Avicenna, appear to have been obtained more or less in an empirical way. On the other hand the Hindu rules are perfectly rational and evince a greater knowledge of the theory as well as the practice on the part of the propounder. Maximus Planudes, adds the digits of the number once and then divides the sum by 9. But the injunction of the Hindu rules is to repeat the first process to the finish, so the second process of division by 9 is no longer required.

Origin of the proof by nine.

There has been much deliberation in recent years about the origin of proof by nine. Maximus Planudes (*c.* 1300 A.D.) attributes the credit of invention of this ingenious method of checking arithmetical operations to the Hindus. From an interpretation of certain expressions used by the celebrated Arab mathematician Avicenna in stating the rules for the verification of the square and the cube of a number, which we have quoted before, Wœpcke has shown that Avicenna believed the proof by nine to be of Hindu origin. Cantor, Tannery, Fink, Heath and other distinguished modern historians of mathematics are also of the same opinion. But Kaye[3] and Carra de Vaux[4] think that the proof by nine did not originate in India, but in Arabia. They have sought to thrust different interpretations on those two expressions and those have been the main stay of their contention against the Hindu origin of the proof. But as will be easily understood, these new interpretations alone can hardly be considered as sufficiently convincing proof in support of their hypothesis. For, even if we assume their interpretations as correct, though they are in fact not, they can at most invalidate the testimony of Avicenna, but not that of Planudes. What is there to contradict and

[1] *Vide* Delambre, *Histoire de l'Astronomie Ancienne*, t. I, Paris, 1817, pp. 518 et sqq.

[2] Behâ Eddin, *Kholâsat al-hisâb*, French translation by A. Marre, *Nouvelles Annales d. Math.*, t. v (1846), p. 263.

[3] Kaye, *Indian Mathematics*, p. 34.

[4] Carra de Vaux, "Sur l'histoire de l'arithmétique arabe," *Bibl. Math.*, xiii (2), p. 33.

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nullify the testimony of Maximus Planudes? It has been stated by Planudes that he derived his knowledge of Hindu mathematics from his Arab teachers. The title of his book is *ψηφοφορία κατ' Ἰνδούς*, or *Arithmetic after the Indian Method*[1] and in it the Arabs are only little mentioned. Hence it follows as a matter of course that the Arab mathematicians of the thirteenth century of the Christian era believed in the Hindu origin of the proof by nine. And up till now nothing has been discovered to contract this belief of Maximus Planudes and his Arab masters. Hence we can still continue to attribute the credit for the invention of the proof by nine to the Hindus. In one point we are, however, quite sure: as Āryabhaṭa II was anterior to Avicenna, he could not have possibly borrowed from the latter

[1] This book was edited as *Das Rechenbuch des Maximus Planudes* in Greek by Gerhardt (Halle, 1665) and in a German translation by H. Waeschke (Halle, 1878).

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The Indian Affinities of Ainu Pottery

By R. D. Banerji.

In Japan the historical period begins at the end of the fifth century A.D. when the ancestors of the present Japanese peoples immigrated into the islands. The aborigines of Japan are known as Ainus, which means men. Up to the introduction of copper and iron the Ainus lived in the neolithic age. Their habitations are marked by immense mounds of molluscs and bi-valves, along the coast of north-eastern Japan. Excavating among these shell mounds Dr. T. Takashima discovered numerous remnants of pottery of a peculiar type which has no analogies to Chalcolithic Chinese pottery. Dr. Takashima's collection has been purchased for his museum at Nagahama in Omi, by the Japanese merchant-prince Mr. Dembei Shimogo. The best collection of Ainu pottery is now to be seen in the Museum Shoshu-Kan founded by Mr. Shimogo. So far nothing was known in India of the form and texture of Japanese prehistoric pottery and its affinities were as much a sealed book to Archæologists as Indian prehistoric pottery was four or five years ago. On the occasion of the visit of the Crown Prince of Sweden to Japan in 1926 the choicest specimens of prehistoric Ainu pottery were described by Mr. Kosaku Hamada of the Archaeological Institute, Imperial University of Kyoto in an illustrated brochure with a short foreword in English. This brochure was brought to India by Mr. T. Shimogo, son of Mr. Dembei Shimogo, who was touring in India with Prof. Kuroita, Professor of Japanese history in the Imperial University, Tokio, in November 1927. I am indebted to Prof. Kuroita for an account of Japanese prehistoric pottery and Ainu culture and to Mr. T. Shimogo for a copy of the brochure and permission to reproduce the illustration.

The points of affinity between Ainu pottery and that of India and Crete are three. Three different types of vessels indicate a definite contact between the prehistoric pottery of Japan, India, Mesopotamia and the eastern Mediterranean islands. The first and the earliest of these is the suspension-vessel. The suspension vessel is a neolithic or perhaps even palaeolithic survival. Its oldest form survives at the present day among the leather bottles of the Mongols and Kurds in which they carry curdled milk while on a long journey or churn butter or cream by tossing milk in these bottles on a blanket or net. Their use lingers at the present day in Central India and Rajputana where they are used for carrying water on long journeys.

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specially on camel's back. Describing certain suspension vessels from the prehistoric tombs from Baluchistan in 1883 the late Dr. John Anderson stated that suspension vessels of this type were made at that time at Erinpura in the Sirohi State and Rewa.[1] At the present day vessels for carrying water are made either of metal or canvas by Rajputs while Muhammadans in certain cases only use thin leather for this purpose.

The suspension vessel from Fukuda in the province of Hitachi to the immediate north of Tokyo was not intended to be used as a vessel for carrying liquids on a journey. Its mouth is comparatively wider and it would have required an exceptionally large lid to stop its contents from spilling (pl. 6, fig. 1.) It has moreover two series of three rings each on each side of its body. The shortness of the neck, the wideness of the mouth and its size indicate that it was used as a butter-churn. It was suspended from the roof and was propelled from one side to the other. Indian, Mesopotamian and Cretan suspension vessels fall into two different classes. Suspension vessels from Mohenjo-daro and Harappa have either four rings or two rings for suspension. Those with two rings are generally flat vessels like modern army-water-bottles and their shape indicates that they were used for the carriage of liquids on long and swift journeys, either on horse-back or on camel's back. There is one exception, however, to this rule. In certain cases round miniature vessels with wider mouths also have two rings instead of four; Bn. 52 is a fairly large and beautifully painted miniature vessel with a comparatively wide mouth but it has two rings for suspension.[2] It could not have been intended for the carriage of liquids on a journey. Other vessels of the same type and very nearly the same size, such as Bn. 32[3] from Damba Koh, and Bn. 53[4] from Chidizi, are provided with four rings. Bn. 65[5] from Gird Koh near Wank is a tumbler shaped vessel with a wide mouth but it has two small loops for suspension instead of four. Regular water bottles were well known. A miniature wine-cooler is almost of the same shape as a modern round flat metal water bottle (Bn. 27).[6] Bn. 28 is a glazed suspension bottle with two rings one on each side.[7] These specimens show that the Indian suspension vessels were used for two purposes, for slinging bottles from the roof or from a peg and for the carriage of liquids on journeys. Specimens

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[1] *Catalogue and Handbook of the Archæological Collections in the Indian Museum, pt. II., p. 446.*

[2] *Ibid., p. 449 ;* See pl. 8, fig. 8.

[3] *Ibid., p. 447 ;* See pl. 8, fig. 6.

[4] *Ibid., p. 450 ;* See pl. 6, fig. 3.

[5] *Ibid., p. 451-2 ;* See pl. 6, fig. 2.

[6] *Ibid., p. 445-6 ;* See pl. 8, fig. 8. From Damba Koh, 40 miles from Suktagen Dor.

[7] *Ibid., p. 446 ;* See pl. 9, fig. 9. Also from Damba Koh.

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from Mohen-jo-daro and Harappa show that even small cups and saucers were provided with four rings or loops for the purpose of suspension. Certain specimens discovered by me indicate that even very large jars were made for suspension. In them a series of large thick rings round the middle served to pass a thick rope which prevented the weight of the liquid from crushing the vessel.

The province of Hitachi in Japan is far away from the Indus valley and Baluchistan and no intermediate links are known to exist in Korea, Northern and Southern China. The painted pottery from Ho-Nan in Central China is allied to pottery of the same class discovered at Mohen-jo-daro and Harappa but no suspension vessels have been described by Mr. T. J. Arne in his monograph on "The painted stone age pottery from the Province of Ho-Nan." Further west, suspension vessels have been found at Musyan, Susa and South Kurgan. But the best preserved suspension vessels come from Crete, particularly, the ruins of Knossos. Cretan suspension vessels of the subneolithic phase belong to two different varieties and resemble the Indian types. They are :—(1) vessels with two rings and (2) vessels with four rings.[1] The vessels with four rings are almost identical in shape with those discovered at different places of Baluchistan or Mohen-jo-daro or Harappa.

The second specimen of Japanese prehistoric pottery which calls for remark is a vessel of a peculiar type. I have heard from Sir John Marshall that these vessels are called "wine-coolers." He himself has discovered at least one of these vessels at Taxila[2] and one specimen from this place has recently been added to the archæological collection in the Indian Museum. The Mockler collection contains "wine-coolers" of two different types. The first type is a low vessel with a flat bottom and a round top, without any handle or an opening in the upper part[3] The second type is a perfectly round or elongated vase without any opening on the top. The point of similarity between these two types are the absence of a neck or opening near the top and the presence of a spout on the side.[4] The second type is a large pear-shaped vessel (Bn. 26). In this specimen there is a ring-shaped handle on the top which is entirely closed except for a very small hole. The only avenue of ingress and egress is a short tapering spout on one side. It is this particular specimen which calls for remark in comparison with Ainu pottery. The specimen of this type in

[1] Sir Arthur Evans, *The Palace of Minos at Knossos, figs. 21-24.*
[2] *Annual Report Archæological Survey of India, 1920-21, pl. XV, 17.*
[3] Bn. 26 from tombs at Juni on the east side of the Bay of Gwadar. Anderson, *Catalogue and Handbook, pt. II, p. 445.* See pl. 9, fig. 10.
[4] *Ibid., p. 445;* from funeral Cairns at Gati, six miles from Gwadar, See pl. 9, fig. 11.

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the Museum Shoshu-Kan is exactly of the same shape, the only difference, being the presence of two ring shaped handles instead of one. The closed top is further guarded by a moulded ridge of clay joining the two rings on each side of the vessel. The specimen was discovered at Shiïtsuka, Takata, in Hitachi.[1] Such pottery, so far as my knowledge goes, has not been found by Pumpelly at Anau, Susa or Musyan. The type also seems to be totally unknown in south-western Asia or Crete.

The third specimen in the prehistoric collection of the Museum Shoshu-Kan came from Fukuda, Osuga in Hitachi. It is an exquisite little dove-shaped or goose-shaped drinking cup. It is an elongated vessel the handle of which is the head of the dove or the goose and the wings are indicated by incised lines. There is a round cavity on the back of the bird and its tail has been fashioned like a hollow tube or funnel.[2] Most probably liquid was drunk from these vessels through the hole in the tail and the contents of the vessel could be added to while a man was drinking out of it from the hole in the tail. Numerous bird-shaped vessels have been discoverd at Mohen-jo-daro and Harappa, but most of them have not been recovered in good preservation. One or two specimens have also been found at north Kurgan but the only vessel which can compare with the Japanese specimen in beauty of shape and execution is the dove-vase of Knossos, discovered by Sir Arthur Evans who supposes that it had some ritualistic use.[3]

These affinities between the prehistoric potteries of Japan, India, Mesopotamia, Central Asia and Crete prove that in the later phase of the neolithic period or the copper age there was direct communication between the people living along the eastern and the southern sea-board of Asia.

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[1] See pl. 7, fig. 4. [2] See pl. 7, fig. 5.
[3] *The Palace of Minos at Knossos, p. 146, fig. 107.*

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Fig. 1. Suspension vessel from Japan.

Fig. 2 BN. 65; Glazed suspension vessel with two rings.

Fig. 3 BN. 53; Painted miniature suspension vessel with four rings.

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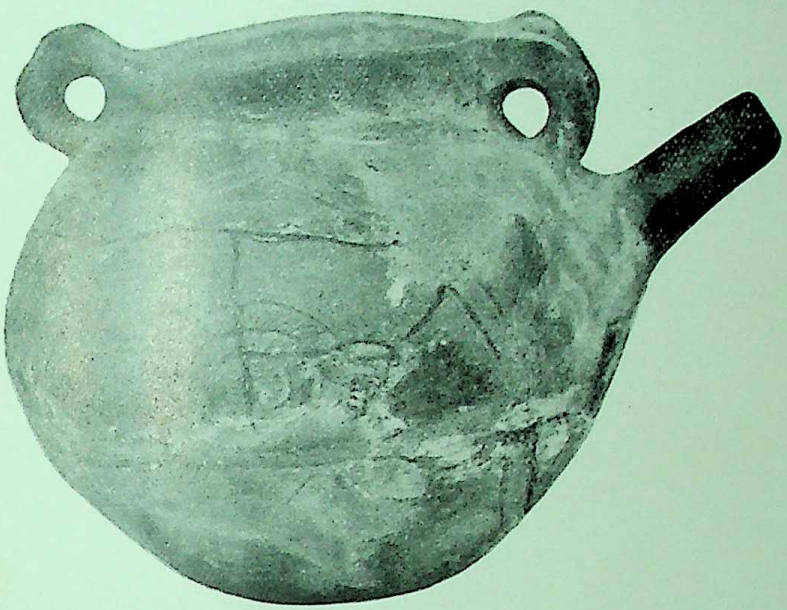

Fig. 4. Wine-cooler from Shiïtsuka, Takata in Hitachi, Japan.

Fig. 5. Dove-shaped drinking vessel, from Fukuda, Osuga in Hitachi, Japan.

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Fig. 6 BN. 32; Plain suspension vessel with four rings.

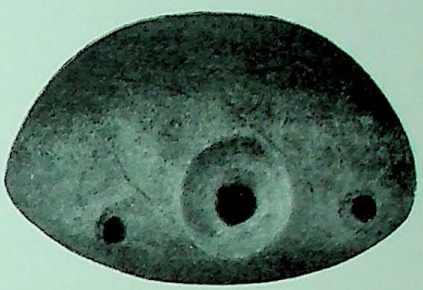

Fig. 7 BN. 27: Miniature wine-cooler.

Fig. 8 BN. 52; Painted suspension vessel with two rings.

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Fig. 9 BN. 28; Glazed suspension bottle.

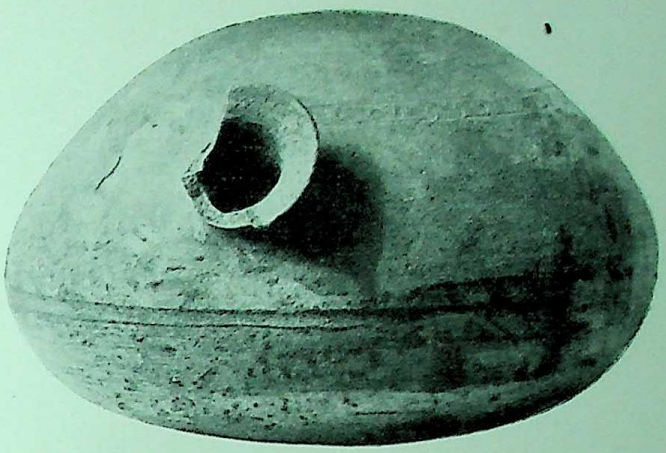

Fig. 10 BN. 26; Large wine-cooler, type A.

Fig. 11 BN. 25; Large wine-cooler, type B.

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Haramukh Legends.

By Mrs. C. De Beauvoir Stocks.

Like many other fertile plains and hills in Asia, the valleys of Kashmir were for long the source of a continuous struggle between different races, each one of them having their own religion and civilisation. The original population of Kashmir—chiefly composed of the Shina and Dard stocks—gave way to different invaders, the latest being Iranian and Turkish tribes, which brought Muhammadanism with them in the XIVth century. The struggle was fierce in those times, and probably is not entirely finished to this day.

It is evident, that in a place like Kashmir, overrun as it is, it would be difficult to look for genuine folklore preserving ancient beliefs in all their clearness. Only isolated temples are sometimes surrounded with legends which date from a remote antiquity, and these have a slightly changed garb, as they have passed from one religion to another. Usually these are found in connection with ruins of Hindu temples, of which, in Kashmir, there are many. Most probably these legends were transmitted from much earlier religions, and belonged to races which have disappeared long ago, and were only absorbed by Hinduism later. It is a Hindu custom to collect and invent legends. which will glorify the miracles and healing properties of the place of worship. Some temples have worked up these legends into the form of old holy books.[1] Indeed, the stories undergo many changes, and have, very often, little to do with the original version.

Such a cycle of legends are these relating to Haramukh,[2] which hitherto, have not, I understand been rendered accessible to Western readers. Rising to a height of 19,903 feet[3] it is seen for many miles, and is regarded as a holy mountain, as is also the Gungabal, one of the many adjacent lakes. Strangely enough my informer was a Muhammadan, a Gujar or shepherd, called Juma Khan. This is an incident of some value, because though the general trend of the legends comes undoubtedly from a Hindu source, they could not have been taken directly from religious literature. It can be supposed that they are founded

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[1] These kinds of legends have a special term, the *mahatmya*.

[2] The early Sanskrit name was Haramukuta, cf. Kalhana's *Rajatarangini* transl. by Sir M. A. Stein (Westminster, 1900, 2 vols.). v. I. p. 20.

[3] Lawrence, *The Valley of Kashmir*, p. 14.

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chiefly on local tradition, but owing to the Hindu worship in these holy localities, have been subjected to considerable Indian influence.

The legends were recorded by me through an interpreter during my visit to Haramukh in July 1927, while at Naranag and Tronkol. The latter place is not far from Gungabal.

Naranag or Naran-nag [1] is the place from which the pilgrims' steep path commences, and is where the group of ruined temples lie, and used to be connected with the worship of Siva. They are called Rujdainbal and Nagbal, and current with the belief that is everywhere connected with ancient ruins, vast treasures are supposed to lie hidden within its walls. In fact it is well known, that ill-luck pursues him who attempts through a thorough search to make the temples give up their riches.

The tank [2] fourteen feet long also deserves mention at Naranag, being carved from one piece of stone. To conclude I will quote the late Doctor E. F. Neve's words from his 'Tourist Guide to Kashmir and Ladakh.'—'Trees have overgrown and almost completely buried several of the smaller temples. On the summit of the largest, a tall pine tree has taken root which rises straight from the centre in rivalry of the original finial. The architecture is of a slightly more advanced type than that at Payech in Eastern Kashmir, the most striking feature being the bold projection and lofty trefoiled arches of the lateral.'

Many years ago, a king called Bekal-singh [3] lived on the mountain called Mahyn. One day, he went out shooting, taking with him, one hundred and twenty-five sipahi.

Now when they had travelled for two days, they came to the foot of the high mountain Israk. There they spent the night, but later a fearful storm arose causing a wide landslip, for many miles, and part of it, falling on the soldiers crushed them to death. The king alone escaped, but feeling too sad to return to his palace, he walked on.

After walking for two days, he met a holy man praying on a hill, and crying out loud, the holy man asked him why he was so sorrowful. The king told him of the loss of all his men, and taking the holy man's advice, he decided to live on the hill with him, first returning to fetch his three sons and one daughter, whom the holy man would teach as no one else could, so famous was he for his knowledge. The king told him to

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1 Details of the history of this temple are given in Sir M. A. Stein's work, *ibid.*, v, I. p. 20, note to the 107th *sloka*.

2 Cf. *ibid.*, vol. II, p. 112.

3 This is the name I made out from my informer's pronunciation. Probably it should be *Beytal-Singh* the demon, who is so popular in Indian folklore.

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instruct them as royal children, for one day, the boys would be the kings of three countries, while his daughter would be the queen of another country. Now the eldest boy's name was Hari Singh, which was changed to Haramukh, the second one was called Nanga Singh which was altered to Nangapar,[1] while the third one was named Kurd-Singh which was changed to Kasinagh (a land that lies near the Lolab valley). The king's daughter was called Braynd, and she was named Bring[2] after a country near Jammu.

Soon after this, the eldest son came to a place that seemed suitable to build on, while he created the Mount Haramuk, and made one big lake and two smaller ones. These were called Gungabal, Nandakol and Lulgulnag. Then he built a small hill naming it Dandider, (or Dandiya-market)? which held all his corn, grain and rice. Here he lived as a king, at last becoming a holy man and making his wazir act as a king for him. He died fourteen years later, leaving three sons. Soon after a ruler came from a far-distant land, fighting and killing all his sons and men. Now it so happened that the King's priest had charge of the hill Dandider, and the victorius king became hungry fighting, and finding the priest begged some food for his men and himself. This the priest refused, and as he prayed to God, the hill turned into mud and stone, but retained its form as a store-house. (This is shown up to the present day.) Then the priest himself, jumped into the Nandakol Lake, and all the triumphant soldiers were so amazed and alarmed at the strange happenings in that astonishing land, that they fled back into their own country.

Then the Nandakol Lake was left alone for several thousand years. The first man to come next was a king from Gujrat. He built a palace at Haramuk, but no trace of it can be seen to-day. Soon after, another ruler being envious of the palace near the mountain, came down, and waging war, killed the king with all his men. He lived there for several years, but never believed the story that he so often heard about the first king's son having created the lake, neither did he believe about the priest having drowned himself in it. One day, a fearful storm arose, which drove snow and ice down from the top of Haramuk and killed this unbelieving king with all his sons, his soldiers and his servants. From that day, snow can always be seen on the mountain all through the summer, and no king lives there now to disturb its solitude.

Now Nangapar, the second son (of the first king), became a holy man, and created the mountain Nangapar which was so called after him. But the third son, Kasinagh, studied hard with the priest, who taught him the magic of blowing on his

[1] Is this Nanga-Parvat, the famous mountain ?
[2] A river and district near Achabal, Bring. Cf. *ibid.* Vol. II. p. 468.

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chest three times and wishing. Then whatever he wanted—from a mountain down to a horse, he had. Kasinagh was told there was no water in the Lolab valley. He made the magic sign with three sticks, and blowing on them, he made water. But the water had come from the land of the Jogi, which land had now therefore run dry. A wizard dreamt that Kasinagh had deprived them of their water, and catching him in the valley, he asked him why he had done this. He was very angry, and turning him into a snake, the wizard put him in his bag and returned to his own country.

There he felt very hungry and thirsty, and eat lots of fruit, though he was unable to quench his thirst as there was still no water. Then he hung his bag on the branch of a tree, and went to sleep underneath. But an old woman passing, thought she would like to see what it was the old wizard had in his bag. As she opened it, the snake jumped out, and found his way to a place called Hamal,[1] which is near the Lolab valley. The old woman followed, and turning, the snake spoke to her. It told her that if she wanted water, she was to dip a stick in the river. Then she was to run home dragging the stick after her, never letting it leave the ground. It would then create a river in its trail. The wizard woke up to the sound of rushing water, and wept as he had not found any. He returned to Kasinagh and asked who had let him out of the bag. But Kasinagh in answer said; Unless you leave me at once, I will kill you. They started fighting, and it went on for seven days, but the old wizard refused to stop, until Kasinagh had promised him some water. At last, his enemy promised him some, and consented to live for six months of the year in Jogi and the remainder in the Lolab.

The holy man then asked the king's daughter whether she would like to get married or not. Replying that she would rather remain single as she was, he told her to go to the land of Poonch. There was no water there, and she was told to scrape on the ground in a curve with a stick, which movement would produce some. Brynd did this, thus creating many rivers with a large lake which was named the Lorun Sat.[2]

Calcutta. April 1928.

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1 The Hamal district. Cf. *ibid.* vol. II, p. 293.

2 Lolan ? Ancient ruins of that name are found in the Lohorin valley.

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Some of the Worship Festivals of the Hos of Kolhan.

By D. N. MAJUMDAR.

As many as seven important worship festivals are observed in Kolhan besides a number of minor ceremonies at regular intervals ; Maghe in January and February ; Baha in March and April ; Damurai in May ; Hero in June ; Bahtauli in July ; Jamnama in August and Kalam in August and September. In Seraikhela and other Feudatory States in Orissa, where the Hos live in close association with the Oriya speaking people, some of the latter's festivals have been absorbed by the Hos. The Oriyas also are seen to join in Ho festivals but they are not allowed to take part in Ho dances. In Ho dance, men and women are seen to mix together freely and enjoy each others company. As the Hos do not allow members of other tribes to enter into matrimonial alliances within their tribe, it is no wonder that they deliberately refuse to dance with the Oriyas. Dances as a rule afford unrestrained mirth to the people and association with others in dances with whom marital relations are tabued may lead to undesirable complications.

The Hos have no fixed date on which the festivals are to be celebrated, the ceremonies depending on the economic condition of the villagers. When their granaries are full and they are free from outside engagements they meet together in the house of the Deuri or priest who appoints a day for its celebration. Each village decides for itself, so that a particular ceremony extends over a long period, say a couple of months, in Kolhan. This is generally the case with Maghe and Baha festivals. The Hos possess no priest-caste among them, the village Deuri who is a member of the tribe and who is entrusted with their religious and sacredotal functions, is more or less a village official and is appointed for his special proficiency in the sacred lore of the tribe. The office is not absolutely hereditary, but generally the Deuriship goes to the family of the Deuri. The eldest son inherits the office of the father. I have seen a case in which the eldest son was a minor, but was allowed to officiate as the Deuri while his paternal uncle cited the hymns and formulas in the Maghe festival, which to all intents and purposes is regarded as the most important 'parav' of the Hos.

The principal festival of the Hos is the Maghe which is held in January and February. As regards the significance of the word 'Maghe' opinions differ. The Mundas and other cognate tribes of the Chota Nagpur plateau also have this festival. Mr. Roy has explained it by referring it to the Bengali month

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'Magh.' As it is held in the month of 'Magh' the festival is known as 'Maghe.' Some are of opinion that as this festival is held in honour of spirits whose bodies were devoured by animals (*i.e.* Magia Bongas) it is styled 'Maghe Festival.' Although the Hos who are in touch with their urban neighbours, always try to misrepresent facts fearing lest their cultured neighbours will speak lightly of them, the people in the interior are to some extent free from this vice, and I have seen that straight questions put to them, have elicited the right answer. It appears from enquiries made in different quarters, that the term 'Maghi' is not the same as 'माघी' in Bengali, but is used to mean the procreative power of young men. Whether the latter significance is an after-thought or the general sexual liberty enjoyed by the people during the festival has suggested such an association that remains to be ascertained. But whenever I approached the people to have my doubts cleared regarding the use of the word, I was given an evasive answer and it was with much difficulty I could arrive at the present significance. Nor does it require any long stretch of imagination to arrive at such an explanation of the word for it is always after the celebration of the 'Maghe' festival that marriages are settled and the Hos believe that if they do not indulge heart and soul during the festival, the number of births in the tribe is sure to decrease.

Every village has to celebrate this festival. Should any village fail to do it, it is sure to be doomed, the villagers are cursed and there is no hope for them. For Dessauli Bonga sends diseases and famines to the village, rats to devour the grains and epidemics to sweep away the villagers. If any individual refrains from taking part in the ceremony, his fate is sealed, his crops are sure to be damaged, members of his family must die or be devoured by wild animals. Such is the strong belief of the Hos, that there is hardly any absentee. People working in remote parts must come back to their respective villages during the festival to take part in it. The absence of any fixed date for the celebration of the festival, accounts for much inconvenience to Ho labourers whose field of work may lie miles away and to young men who are tempted to participate in it in different villages. The festivals of the Hos afford unrestrained mirth and dalliance and these are baits enough to tempt the young men from neighbouring villages. The pernicious effects of the prevalent system of celebrating the festival in Kolhan have called for direct action on the part of Ho leaders and the precautionary measures adopted by them are commendable.[1]

The ritual portion of the festival extends over five consecutive days and on all the days except the last the villagers with

[1] Modern Review, March, 1925. Author's article on Social Reform.

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the Deuri at their head offer *Pujas* and sacrifices to the village deity or Dessauli Bonga. Offerings of 'handia' and sacrifices of fowls and 'bodas' or he-goats to 'oa' or 'wagoi' Bongas (family spirits) are obligatory on every occasion.

The following functions are attended to:—

(1) 1st day. Gawmara.
(2) 2nd day. Ote-illi.
(3) 3rd day. Loyo.
(4) 4th day. 'Marang parav.'
(5) 5th day. Basi or Bonga Hanr.

Gawmara:—When the villagers get ready for the festival, they meet at the house of the Deuri, where they decide upon a date for the celebration. Every Ho village is self-sufficient. It contains a family or two of 'Tantis' or weavers who supply coarse clothes to the Hos; one or two families of 'Lohar' or Blacksmiths, and a few families of 'Gaw' or cowmen. These belong to the lowest strata of Hindu society and mostly imported to be of service to the Ho population. They are generally paid for their services in kind, and in no case are allowed to hold lands for cultivation. The 'Gaw' tends the cattle of the village. The Hos do not milk their cows; for the milk belongs to the calves, and to deprive them of it, is, in their opinion, tantamount to depriving a child of its mother's milk. Besides, the Hos consider it derogatory, if not beneath their dignity, to tend their cattle, so the 'Gaw' is appointed to look after the animals, for the Hos require them only for ploughing and preparing the soil. Now when the date for the ceremony arrives, the village 'Gaw' is summoned to the house of the Deuri who instructs him about the paraphernalia required for the festival. On the morning of the first day of celebration, the villagers assemble in the courtyard of the Deuri, with offerings of heaps of grass known as 'Saiu' and 'Bunum' which are placed on the spot rinsed with cowdung solution. After a clean bath with an empty stomach and a clean and white 'botoi' on, the Deuri takes his seat in front of the heaps of grass and worships the prominent Bongas of Ho pantheon beginning with Dessauli. As soon as the worship is finished, the 'Gaw' is called upon to scatter the grass with his head imitating the ways of the cattle which he tends. The villagers then come back to their respective houses where they offer 'handia' and sacrifice fowls to 'oa' or 'wagoi' Bongas or ancestral spirits. The rest of the day passes in dance and animated revelry in the village 'akhara.'

Ote-illi:—On the second day, the Deuri offers 'illi' or rice-beer to the Bongas. The villagers come with pots full of 'illi' or rice-beer. The Deuri and his wife sit together in the courtyard, each with a cup made of sâl leaves in hand and two of the villagers approach the couple to pour the liquor

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from the pots to the leaf cups. The first man pours the liquor into the Deuri's cup and the next into that of the Deuri's wife. The Deuri mutters some incantations and then pours down the contents on the ground. The wife follows suit. Next, the two villagers change places and the first man pours liquor into the cup of the Deuri's wife while the second man fills up the cup of the Deuri. This time also the liquor is dropped down. The process is thus repeated seven times, each man giving the liquor alternately to Deuri and his wife. The seventh time being over, Deuri and his wife drop down the leaf-cups and leave the place amidst loud cheers and 'hullah' of the villagers. The remaining liquor is then distributed amongst all present, who cheered with the intoxicating drink, set up a dance at the village 'akhara' which is continued till late hours at night.

Loyo :—There is no general 'puja' or sacrifice this day. The villagers observe it as a purificatory day, preparatory to the Marang festival, the principal function of the Maghe festival. Every house is swept clean, the floors and courtyards rinsed with cowdung solution and the villagers take a purificatory bath in the neighbouring river or tank as the case may be. On their return to their respective homes light cowdung solution is sprinkled on their heads and on all the articles of domestic use. After the ceremonial bath, villagers may offer sacrifices to the 'oa' or 'wagoi' Bongas, if they had promised to do so during illness or for any social or agrarian troubles that might have occurred in the preceding year. The rest of the villagers pass the time in frivolous jollities.

The fourth day is set apart for the celebration of the 'Marang Parav,' which is the main function of the festival. The Deuri has to fast all day and is not allowed to take anything except some quantity of rice-beer which is a drink of the Hos. Generally speaking, he does not touch rice-beer even. The ceremony begins from the afternoon, when the villagers accompany the Deuri to the village 'bandh' or river, where the latter takes a ceremonial bath amidst deafening cheers and 'hullah' of the villagers, and the drums playing all the time. The place of worship is always outside the limits of the village, at the crossing of two or more village alleys, where a raised platform has already been erected the day before. The Deuri is then conducted by the villagers to this place of worship after his ceremonial bath to invoke the 'Dessauli Bonga' and to offer sacrifices. The villagers take with them one large pot containing rice-beer, a pot full of water, some leaf cups, one red cock and two hens. The Deuri first places a piece of bark which they call 'lama' and an 'Icha' twig with blossoms, which they call 'ichabah' with the chanting of some formulas, most of which are corrupt 'patois' consisting of obscene utterances and are supposed to please the Dessauli

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Bonga. The Deuri then pours rice-beer into the leaf cups, and scatters some 'arua' rice on the ground and taking hold of the cock utters the same incantations again. After each repetition of the hymns, the Deuri places the cock on the ground so as to enable it to eat the grains scattered and the villagers about four or five in number assist the Deuri in blowing horns of buffaloes each time the cock partakes of the grains. The process is repeated seven times, when the cock is killed by the Deuri amidst deafening sounds of horns. The fresh blood is poured on the ground in front of the Deuri and the cock thrown aside.

Next the Deuri takes the hen and chants the incantations and after the seventh repetition the hen is likewise killed and offered to the 'Nage Bonga.' As the 'Nage Bonga' is a female spirit a cock cannot be offered to her. The blood is sprinkled on the ground and the body put aside. Lastly the Deuri takes the second hen and offers it to 'Buru Bonga' and other spirits of the forest, this time, however, the hen is not sacrificed by the Deuri, who throws it away after citing the hymns, when the villagers kill it each throwing a stone at the poor creature, thus affording cruel sport to the gathering. The Deuri then sprinkles water on the cock and the hen and the villagers who assisted the Deuri take them to the Deuri's house, where these are cooked and eaten by the Deuri and his helpmates. The rest of the villagers then retire to the village 'akhara' where the dance is in full swing and join with the party. The hen killed by the villagers is the spoil of the village Dom.

The songs sung on the occasion are either serious or obscene. The obscene ones are fouler than language can express. An example of the latter is the attempt of male dancers to describe the female organ while the female dancers describe the male organ. They will tell you that unless the villagers indulge in these vulgar songs, calamities worse than death are sure to fall on them, the Bongas would get displeased and in their wrath cause all sorts of diseases and epidemics to chastise the villagers. The underlying motive of this particular custom seems to be something else, for we know that the Oraons also perform certain magico-religious observances to augment the procreative power of the tribe. A slit is made on the central pivot of a dormitory house, and the boys are required to press their generative organ into this with the belief that this magical observance will increase the procreative power of the young men of the tribe. So the description of sex organs too may mean a device for augmentation of the generative power of the tribe; for we know, amongst the Hos during festivals, men and women mix freely and great strain is exercised on the laws of decorum. Sexual license before marriage, though not tacitly recognised, is prevalent amongst the Hos, and a girl does not suffer on account of any intrigue

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before her marriage. Practically there are no social laws forbidding a young man to enter into much intimacy with a girl of a neighbouring village—unless the intimacy is carried to the extreme and an issue is apprehended. In such case the girl's parents will force the young man to marry the girl, or bribe some other young man to marry her.

The fifth day witnesses a typical ceremony known as the 'Basi' or the 'Bonga hanr' or the expulsion of the spirits. Like the 'Bisarjan' ceremony of Hindus, performed on the 4th day of the 'Durga Puja' when the Goddess 'Durga' with all her company is commuted to the river, the Hos also drive away the spirits on the fifth day of the festival.

The function is called 'Basi' or the end. The villagers armed with sticks, four to five cubits long, come out in batches of ten to twelve and begin hunting the spirits with vociferous songs and incantations unintelligible to the villagers themselves. They assemble at the boundary line of the village and begin by singing or rather chanting their invocations in singsong tune and run in zigzag way till one of them shows signs of being possessed with a spirit and points out a spot which is accepted by the villagers as the haunt of the spirits. The possessed man runs with the villagers at his heels on to a big tree or 'jungle' near by and addresses the spirits thus :—

We have brought you here.
We want you to stay here.
Please take up your abode on the tree.

With these words they return to the village. Thus finishes the great 'Maghe' festival of the Hos.

Baha Festival :—Baha means flower and 'Baha parav' is the flower festival of the Hos. It is held early in Spring between March and April when the Sâl tree blossoms. Nature wears a flowery garment and like a newly wedded bride she appears with all her freshness and charms. The primitive mind marvels at this mystic and wonderful aspect of Nature, and the surprise that makes him to approach her with all the reverence of a devotee, induces him to place his choicest presents at her sacred altar. Nature is believed to be the bride of 'Sing Bonga' and the divine marriage is consummated by universal rejoicings and offering Pujas and sacrifices to the 'Dessauli.' The divine marriage is also regarded as the symbol of fertility. The Mundas and the Oraons also celebrate this divine marriage and all their marriages are held after the consummation of the divine marriage. The Hos also do not allow any wedding before the 'Baha' festival. The explanation of this divine nuptial may be gathered from the following extract from Dr. Frazer's Golden Bough (Abridged Edition, p. 142).

"At Athens, the god of the vine, Dionysus, was annually

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married to the queen, and it appears that the consummation of this divine marriage as well as the espousals was enacted at the ceremony but whether the part of the god was played by a man or an image we do not know. We learn from Aristotle that the ceremony took place in the old official residence of the king, known as the cattle stall which stood near the Prytaneum or Townhall on the north-eastern slope of the Acropoles. The object of the marriage can hardly have been any other than that of ensuring the fertility of the vines and other fruit trees of which Dionysus was the god. Thus both in form and in meaning the ceremony would answer to the nuptials of the king and queen in May."

Again, in the same work we find, "Every year about the middle of March when the season for fishing with the dragnet began the Algonqiuns and Hurons married their nets to two young girls aged six or seven. The reason for choosing the brides so young was to make surer that they were virgins. They did so and the fishing turned out all that could be wished."

The illustrations cited above make it clear that these fanciful and dramatic nuptials are intended as a magical device to augment the fertility of the vines or fruit trees or to ensure success of the fishing season. The same may be held with regard to the divine marriage of the primitive tribes who also intend to ensure the fecundity of the tribe.

The festival extends over two consecutive days. The first day is known as 'Bagurugiti.' Every village possesses a big tree or hill near by which is regarded as the abode of the 'Dessauli Bonga' and the villagers with the Deuri at the head approach the abode of the Bonga with a basketful of cowdung. A particular spot is selected under the tree or at the foot of the hill which the Deuri sweeps and plasters over with cowdung. He then promises to the 'Dessauli Bonga' that he would come the next morning with offerings and the party retire to the village. The Deuri fasts all day and is only allowed to drink small quantity of rice-beer. At about 10 A.M. next morning the 'Puja' begins. The male members of the village with the Deuri go to the appointed place where the Dessauli is worshipped with great eclat. The villagers place heaps of Sâl flowers on the spot, sprinkled with cowdung solution. A cock is also taken for sacrifice. First the Deuri offers the flowers to the Dessauli with incantations :—

Tising deo bahaparav hamoko dumoko
Mera kula mera bing buru horare
Gara horare sitia betiako bugite kotauko
Mera boasu mera laiasu.

* * * * * * *

Baha subarer sebametanai saramtanai
Parjako paikiko merako laihasua, merako bohasua
Bugiakan napaikan gekako

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Then the cock is taken by the Deuri and as in the 'Marang Parav,' some grains of 'arua rice' are scattered on the ground. The Deuri utters incantations in honor of the Dessauli and after each such incantation the cock is placed on the ground to enable it to partake of the scattered grains. This is repeated seven times when the cock is killed by the Deuri.

Next the Deuri has to cook the sacrificed cock and some 'arua' rice on the spot. When the cooking is finished the Deuri's wife goes to the spot and stirs the contents of the pots with a ladle. The number of stirrings is limited by the number of times the Deuri walks round the spot citing incantations as he moves.

The Deuri then distributes the flowers amongst the villagers who rally around him to receive them. The flowers are made to hang freely from the thatch of every house in the village, and it is believed, that the flowers possess the power to drive away diseases and epidemics.

The party then retire to the village where the women expect them. For it is the custom in Baha festival not to cook food before the people return from the 'Puja.' With the exception of 'handia' the villagers, male and female, do not touch any food. On return from the place of worship the villagers propitiate the 'Oa' Bongas in their respective houses with rice, 'handia' cocks or he-goats as promised during the year. This being finished the women cook their food and men and women sit together for the breakfast.

Maidens deck themselves with floral wreaths and like angels tread lightly up and down the village attracting notice of the young men who come from all parts of Kolhan to enjoy the festival. This is the time for mutual selection; and young people desirous of matrimony make the best use of the occasion. And as a result of this many matches are consummated after the Baha festival.

Early in July when the fields are ready for cultivation and seeds are to be sown, the villagers observe a festival known as Hero-Parav. This time also the presiding deity of the village, i.e. the 'Dessauli Bonga' is worshipped with offerings of handia, he-goat, etc. The first day is known as 'gurugiti,' when the villagers select a spot each in his respective field and besmear it with cowdung. When the spot is thus rinsed, each villager places three sticks tied together with ropes made of 'Babui' plant and cover the sticks with thorns to protect these from the cattle. The villagers vow to the 'Dessauli Bonga' saying that they will offer sacrifices and pujas next morning.

The next day at 11 A.M., the villagers accompany the Deuri to his field where he worships the Dessauli with sacrifices of 'Bodas' or he-goats and offerings of 'handia.' Then they go to their respective fields and worship the Dessauli separately

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with offerings that they can afford to, after which they return to the village. In the evening each villager prepares bread or 'chapai' in his house and consecrate a portion to 'Oa' or 'Wagoi' Bongas after which they sit down together for the meals.

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The Use of Nose Ornaments in India.[1]

By K. N. Chatterjee.

(Communicated by Dr. B. S. Guha.)

A comparative study of ornaments and modes of ornamentation, ancient and modern, shows many striking changes that have taken place in this country during the passage of centuries.

Amongst others the use of nose ornaments may be cited as a prominent case in point, for, although this particular class of ornaments is now in almost universal use all over India, it can be definitely proved that it is foreign in origin and of comparatively recent introduction.

In a study of the antiquity of types of ornament in India, one has perforce to fall back on secondary evidence, due to the fact that, unlike Egypt, very few actual finds have been made of ancient hoards of ornament and treasure. It may be remarked in passing that amongst these few finds of antique jewellery not a single article can be definitely said to be a nose ornament.

The secondary evidence referred to above may be divided into two sections, namely:—

1st. Evidence of visual representation, such as sculpture, painting, frescoes, etc., from historical monuments and temples.

2nd. Evidence in Literature.

I will first put forward the results of the investigation of the evidence in pictorial and plastic arts.

I started with the Barhut stupa remains in the Indian Museum of this city, because the figures cut in relief are in good preservation and a profusion of jewellery of many types and varieties are represented therein. The number of male and female characters depicted is very large and they represent all classes. A minute examination failed to show a single nose ornament. In confirmation of my findings I may quote Cunningham's remarks in his monograph on the Stupa of Barhut, p. 34.

"There are no nose rings and I may note here that I have not observed the use of this hideous disfigurement in any ancient sculptures."

Next came Sanchi. I have to confess here that my search in this case was conducted by means of photographs of the

[1] Read before the Anthropological Section of the Indian Science Congress held in Calcutta, January, 1928.

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Archaeological Survey of India and not by examination in situ. However, here also I found no nose ornament.

Similarly, the sculptural remains at Bodh Gaya, Amaravati, Udaigiri, Sarnath, Badami, Ellora, Elephanta and the Orissa temples at Bhubaneswar and Konark were studied by means of the photograph albums of the Archaeological Survey and from the illustrations in the various memoirs, monographs and histories of art, such as those by Fergusson, Cunningham, Burgess, Vincent Smith and Coomaraswamy.

A prolonged and careful search showed that nose ornaments were absent in all these photographs and drawings, and the same was the case with regard to the reproductions of the collections of ancient and mediaeval Indian sculptures in the museums of this country and abroad.

During a recent tour in the States of Udaipur and Jaipur in Rajputana I carefully examined the sculptures on the temples and monuments at Eklingarh, Chittor and Amber. I was not able to find a single instance of a nose ornament even in the Jagat Siromani temple of Amber, which is reputed to have been built by Raja Mansingh, the great general of Akbar.

Further I may say that I have carefully searched the statuary and other sculptural work on view in the archaeological galleries of the Indian Museum. Nose ornaments are conspicuous by their absence there, too.

The sculptural remains mentioned above cover a period starting from about the 2nd century B.C. to the sixteenth century of the present era.

The only instance that I have been able to find of nose ornaments being shown in plastic work is in the Pudu Mandapam of the great temple at Madura, where the statues of the queens of Tirumal Naik are shown with nose ornaments. These sculptures were executed during the 17th century and therefore may be considered to be fairly recent.

Beyond the limits of present-day India, there are the immense and fairly well-preserved sculptural remains of Borobudur and Prambanam at Java. It is, I believe, fairly certain that these works were executed under Indian direction and the inspiration and technique are typical of Ancient India.

I have examined a fairly complete set of excellent photographs of these places and also the splendid reproductions in Krom's Borobudur. There also the nose ornament is absent.

Turning to pictorial evidence we have the Frescoes (or as Sir John Marshall says, tempera paintings) at Ajanta and Bagh in India and Sigiriya in Ceylon.

I have very carefully gone through the reproductions in Griffith's and Lady Herringham's books on Ajanta and the recent publication of the India Society on the cave temples at Bagh. They do not contain any representation of nose ornaments. In confirmation with regard to Ajanta I may

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quote Griffith. "The nose ring nowhere appears." Griffith's Ajanta, Vol. 1, p. 16.

Similarly, nose ornaments are absent in the few drawings I have seen of Sigiriya frescoes.

Going further afield, I may mention that the reproductions of the paintings in the cave temples of Tun Huang, published by Sir Aurel Stein in his "Thousand Buddhas," do not seem to contain any nose ornaments either.

Coming to Indian paintings in general, the earliest representation of nose ornaments that I have seen are in the reproductions of some illustrated Gujrati manuscripts, reputed to date back to the 15th century, in Coomaraswamy's History of Indian and Indonesian Art. I have myself seen several such manuscripts in some private collections, though they are not so old, and they undoubtedly do show nose ornaments.

In striking contrast to the above are the illustrations in the Razm Namah, in the Jeypore State library. This book was written and illustrated by the order of the Emperor Akbar. I do not remember having seen any nose ornaments in any of the illustrations, although it must be said that I had no chance of carefully going through them. In any case, several of those pictures have been reproduced in the Journal of Indian Art and elsewhere, and in these the female characters depicted have not been shown with nose ornaments, although profusely adorned with jewellery otherwise.

Later paintings show nose ornaments as a rule, although a painting depicting the marriage procession of Prince Khurrum (later the Emperor Shah Jehan) shows a troupe of female musicians not one of whom has any nose ornament.

Next comes the question of evidence in literature. I have to start here with a confession that my knowledge of Sanskrit being very poor, I have had to rely upon the authority of others.

I have myself only gone through Arthashastra and Amarakosha. Arthashastra contains a detailed account of the stringing of pearls and precious stones together with the uses of the same for personal adornment. Various parts of the body and head are described as being the seats of ornaments, but the nose is excluded, although, as is well known, of all gems the pearl is most commonly used in nose ornaments. Amarakosha gives a fairly big list of ornaments in use in India at that period but no mention is made of nose ornaments.

In a paper, which deals with literary evidence only, on the question of the nose ring as an Indian ornament published in the *J.P.A.S.B.*. (N.S.) Vol. XIX., Mr. N. B. Divatia, B.A., C.S.. makes the definite statement that neither the Sanskrit lexicons nor the general literature contains any reference to the nose ring.

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Prof. Jogesh Chandra Ray Vidyanidhi, the well known lexicographer and Sanskrit scholar, in an article of his published in the Bengali periodical "Prabasi" Vol. 27, part 2, No. 1, mentions that he has failed to find the name of a single nose ornament in Sanskrit literature, thereby confirming my views on the subject as expressed in an article published previously in the same journal.

Both the authorities quoted above agree that the present-day Indian names of such ornaments are of non-Sanskritic origin. Indeed Mr. Divatia quotes from two Persian lexicons, Asaf-ul-lugat, and Gayas-ul-lugat, which give Persian names of nose ornaments together with the statement that such names are of Turkish derivation.

From what has been stated above, I hope my contention that nose ornaments are non-Indian in origin and were unknown here up to the early mediaeval period has been amply substantiated.

Next comes the question as to the source from which such ornaments were introduced into India.

Mr. Divatia contends that sincet he present-day Indian names of this class of ornaments are Mohammedan in origin, and further since De Quincey in his "Toilette of the Hebrew lady" mentions that nose ornaments were in vogue amongst the Hebrews and the Midianites, it can be taken for granted that nose ornaments were introduced by the Mohammedan invaders and that they originated in the Mohammedan countries abroad.

I personally cannot make any definite statement in this matter, excepting that everything points to the introduction of nose ornaments by the Mohammedan invaders, inasmuch as they appeared in India after the Mohammedan invasion and the use of such trinkets became widespread with the expansion of Mohammedan power here.

As regards the origin in Mohammedan countries I am not so certain. I failed to find a single illustration of any such ornament amongst hundreds of excellent reproductions of any plastic and pictorial art from the ancient monuments of Egypt, Phoenicia, Babylonia, Assyria and Ancient Persia.

It is true that the nose jewel "Nezem" was in use amongst the Hebrews, as we find mention of it in the Bible in several places, such as amongst the presents given to Rebecca by Abraham's servant (Gen. XXIV. 22, 47) and in Ezekiel (XVI. 12) "a jewel for her nose," etc. But still that does not explain the absence of such ornaments from the pictorial and plastic representations. The ornament was probably like our Laung, Phuli or Nakchhabi and not the Besar, Bulak or Nath which entails piercing of the septum.

It may be that a particular group of Semitic tribes were in the habit of using nose ornaments.

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Nose ornaments of various kinds are in use at the present time in Egypt, Syria and a few other countries inhabited by a Mohammedan population. The solitary pictorial evidence that I have so far found to prove that nose ornaments were used by Mohammedans in the early mediaeval period, lies in a painting by Shapur, the famous Persian painter, depicting a dancing scene at the court of Mohammad Tughlak. All the dancing girls, whose costume, head-dress and features are foreign and Mohammedan, wear nose ornaments. Otherwise the Persian, Arabic and Turkish paintings, as in Martin's collection, do not show this ornament.

That other peoples, besides those of India, who came in contact with the Semitic Mohammedan civilization, also adopted nose ornaments is seen from the following description of the dress and ornaments of a particular Tartar tribe in a book named "The Costumes of the Russian Empire" published in 1803. Similar details of many other Tartar tribes are also given but with regard to this particular one, the Nogai, the description contains the following extraordinary statement:

"And some of them even pass through the nostrils a ring loaded with pearls and valuable stones which descends as low as the mouth; this strange ornament is not uncommon to the females of Astrakhan and is generally worn by all those who dwell on the borders of Akhtouba" (i.e. the Persian border)

In describing their occupation the book further says: "they carry on an extensive commerce with the Armenians, Persians and Boukharians," which shows their points of contact with the Mohammedan civilization. The ornament described resembles our Nath. It would be interesting to find out the history of this article in that locality.

In case it could be proved that the use of nose ornaments was absent or fairly scarce amongst such peoples of India as did not come much in contact with the Mohammedan civilization, by virtue of their places of habitat being either difficult of access during the Mohammedan suzerainty or being situated beyond the reaches of Mohammedan conquest, then a further proof of the Mohammedan medium of introduction of these articles would be established. Unfortunately I have not been able to go very far in this matter for want of ready reference. Still I may mention the following facts for all they are worth:

In the monograph on Birhors (by Mr. S. C. Roy) it is stated that that tribe does not use nose ornaments. The Birhors live in a country that was particularly out of the way prior to the introduction of railways.

In Mr. A. K. Iyer's monograph on "The Cochin tribes and castes" the descriptions of the dress and ornaments of the various tribes are commendably complete and the book contains some excellent reproductions of photographs. In the following descriptive accounts and photographs no nose ornament is in

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evidence, although elsewhere they have been both described and pictorially depicted:

Pulayans—Photograph of a group of seven females and description.

Kaniyan—Photograph of a group.

Valan—Photograph of a group of 12 females and description.

Indeed it may be said that nose ornaments do not seem to be much in use amongst the tribes and castes described in Vol. I of that treatise and amongst the fishing tribes described in Vol. II. These tribes are mostly forest dwellers or fishing peoples of the coast, that is to say, the segregated peoples of a country that lay beyond the precincts of the Mohammedan empires and kingdoms.

Thurston's treatise on the castes and tribes of Southern India is not so complete as Mr. Iyer's book with regard to the description of dress and ornaments, but still from what there is in that work it seems that the Kanikars and Todas do not use nose ornaments to any appreciable extent. In the case of the Kadir tribe it is distinctly mentioned that the males have their noses pierced and stopped with pieces of wood. No nose ornaments are mentioned in the case of the females, neither does the photographic reproduction show it.

Apart from such isolated groups it may be said that nose ornaments are in general use throughout present-day India proper, although there are signs of its falling in disfavour in the more cultured and advanced sections of society.

To sum up, it seems quite certain that nose ornaments came into India with the Mohammedan invaders, or rather I should say, in the train of the invaders, for who amongst them —Arabs, Persians, Moguls, Turks, Tartars, etc.—were actually responsible for the introduction, and whether those ornaments were in general use amongst the introducers for any considerable period of time, cannot be determined as yet. The evidence of Persian miniature paintings seems to show that it was not in use in that country. Manucci's descriptions seem to prove that it was not in general use in the Moghul harems of his day. So far for negative evidence.

As regards positive evidence, we have the following, namely: (i) the use of the Nezem amongst the Hebrews of ancient time and probably some other Semitic tribes, (ii) the picture of the female dancers in Shapur's painting, (iii) the nose ornament worn by the females of the Nogai tribe in common with all tribes of Astrakhan (Costumes of the Empire of Russia) on the borders of the Akhtouba, (iv) the present-day use of nose ornaments in Syria, Egypt and parts of other Mahommedan countries, (v) the derivation of the word "Bulak" or "Bulakh" denoting a nose pendant (composed usually of three pearls arranged in a triangle of which the

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lowermost is usually an elongated pear-shaped pearl) used in Northern India. Mr. Divatia says that the lexicon (Asaf-ul lugat) consulted by him gives the derivation as from Turkish and the meaning variously as (*a*) hole, (*b*) the nostril, (*c*) string passed through a camel's nose, and lastly (*d*) as a nose ornament. The further information is given that the Turks consider this word as of Eastern (Mr. Divatia takes it that "East" in this instance means Arabia, Persia, etc.) origin. The last (vi) and the most important piece of evidence is as follows. It can be easily shown that almost all Indian ornaments which were in use in this country in the Pre-Mahommedan period, reached Further or Greater India to the East, meaning such countries as Burma, Malay Peninsula, Java, Bali, Borneo, Siam, Indo-China, etc., by means of cultural contact through trade, religion and in some cases actual conquest. But strangely enough, of the myriad forms and varieties of nose ornaments not one, not even the practice of wearing ornaments on the nose, can be found to the east of India amongst the actual native present-day peoples of those countries, nor can it be seen on the sculptural or pictorial depictations of the same during the past ages. Whereas, with regard to the countries and peoples to the West of India, nose ornaments can be seen as far as the boundaries of Mohammedan empires and kingdoms of the past and present, with very few blank spaces—if at all. This certainly does point to the introduction of nose ornaments into India from the West and that by the Mohammedans. The countries to the east of India escaped actual conquest by the Mahommedans who overran India, and hence probably the absence of nose ornaments in those countries.

With regard to the above-mentioned instance a good deal of further investigation is necessary, which I am unable to do for want of requisite knowledge and reference, and therefore can only indicate the lines on which it may be conducted by those with the proper equipment for the same, and pass on.

In (ii) the dancers may be identified from their dress, features, etc., in (iii) the tribes "in the borders of the Akhtouba" may be identified and the custom of using nose ornaments amongst them investigated as to the origin and distribution from the accounts of travellers like Marco Polo on the one side and Muller, Pallas, etc., on the other. Accounts of recent travels may also be consulted to find present-day distribution.

The evidence in (v) raises a question. It is said that Bulak means nostril, a hole, string passed through a camel's nose and. finally, a nose ornament. The distribution of nose ornaments along the Astrakhan border of Persia, Syria and Egypt suggests the route of the camel caravans. Has this fact any significance ? What about the intermediate places and the further (Central

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Asian) reaches of the caravan route ? How far can this connection between the camel caravan and the nose ornament be traced ?

In this connection it should be mentioned that the word "Nath" or "Nuth" meaning a nose ring, has the widest distribution in India amongst all the names of nose ornaments. We find this term being used all over India as meaning the almost identical ornament, whereas other ornaments have different names in different parts of the country. Nath is the term used in Gujrati, Sindhi, Marathi, Hindi, Bengali, etc., and in Mr. A. K. Iyer's Cochin tribes and castes, we find the same term in use in Cochin too to signify a nose ring. Mr. Divatia says that this word is derived from a Desya word Naththa—णत्था, meaning a nose string as passed through the nostrils of bullocks, camels and the like. He quotes Hemachandra's "Desi namamala" N. 17. which gives नासारज्जु as the only meaning of Nath. All these seem to point to the cattle nose string in general and the camel nose-string in particular as the source of origin of the nose ring and pendant.

The evidence in Arabic and Persian literature on this point would be valuable, specially as to the earliest mention of these ornaments.

From Col. Hendley's monograph on "Indian Jewellery" we get a few bits of information regarding the use of nose ornaments abroad, from which we gather that such ornaments are in use amongst the Bhots, the hillmen near Kabul, the Pukhto or Pukshto speaking peoples (the Pathans), the Brahuies, the Persians, the Arabs of Zanzibar, the modern Egyptians and in Lars and Ormuz.

We also find from the same source that the Parsi and the Beni-Israel communities had the custom of using nose ornaments, some forty or fifty years ago, but since then this practice gradually fell into disfavour and finally disappeared.

The present-day distribution of nose ornaments in India is very wide and a complete list of names, together with descriptions and mode of wearing, is very difficult to get together. The following list, compiled mainly from Col. Hendley's monograph, is incomplete but may give some idea both in the matter of distribution and that of variety. A few foreign names are also adjoined, just to show the track of the nose ornament, which is from Westwards into India and no further to the East.

SOME NAMES OF NOSE ORNAMENTS IN INDIA AND BEYOND.

Term.	*Broad description.*	*Localities where the term is used.*
Nas ..	Nose ring ..	Maharashtra.
Nath ..	Nose ring ..	Sindh, Punjab, Gujrat,

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Term.	*Broad description.*	*Localities where the term is used.*
Nath ..	Nose ring ..	United Provinces, Behar, Bengal, Bombay, Cochin, Rajputana.
Nathiya ..	,, ..	Behar, Sindh.
Nathni ..	,, ..	Rajputana, United Provinces, Behar.
Nathdhaga ..	,, ..	Punjab.
Nathu ..	,, ..	Madras.
Naththa ..	,, ..	Madras.
Bulak ..	Nose pendant ..	Amongst Mohammedans generally and in Punjab, United Provinces, Behar, Gujrat.
Boolakee ..	,, ..	Madras.
Bulo ..	Nose ring ..	Sindh.
Laung ..	Nose stud ..	Punjab, Sindh, Rajputana, United Provinces, Behar.
Bhauriya ..	,, ..	Rajputana and nearabouts.
Latkan ..	Nose pendant	Rajputana, Punjab, United Provinces.
Nolak ..	,, ..	Bengal.
Morni ..	Peacock-shaped pendant to Nath.	Rajputana, Punjab.
Phuli ..	Small ring with a single stone pendant.	Punjab.
Bohr ..	A jingling pendant of gold pipal leaves.	Punjab and Kashmir (?)
Machchlian-be-sir.	Headless fish-shaped ornament.	Punjab.
Bala ..	Nose ring ..	Punjab.
Mavkis ..	,, ..	Gujrat.
Walis ..	,, ..	,,
Kanta ..	,, ..	,,
Jado ..	,, ..	,,
Besar ..	,, ..	Gujrat, United Provinces, Behar.
Besor ..	A small Nath ..	Bombay.
Bali ..	,, ..	Gujrat.
Phula ..	Nose ring with pendant.	Brahoe, from Stack's Dist. Quoted in "Indian Jewellery."
Chhuchchi ..	Nose stud ..	Behar.
Nakchanda ..	,, ..	,,

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Term.	*Broad description.*	*Localities where the term is used.*
Jhuhir ..	Nose pendant ..	Behar.
Nakchchabi	Nose stud ..	Bengal.
Pezwan ..	Nose ring ..	Pukhto or Pukshto (Pathan) words from Bellew's Dist. Quoted by Hendley in "Indian Jewellery."
Natkai ..	,, ..	
Chargul ..	,, ..	
Pishai ..	,, ..	
Halkah-i-bini	Nose ornament	Persian names. From Persian Dist. by Wollaston. Published in 1889. Quoted by Hendley in "Indian Jewellery."
Khazam ..	,, ..	
Barsan ..	,, ..	
Khizam ..	Nose ring ..	Egyptian terms from Lane's "Modern Egyptians" Quoted by Hendley in "Indian Jewellery."
Khuzam ..	,, ..	

There are two principal methods of wearing these ornaments, first by means of a hole bored in the alae of the nose. Hindus of Upper India have only the left alae bored and the Mahommedans the right (Indian Jewellery, page 71). In Madras they frequently bore both the alae. The second method is by a hole bored through the septum. This latter practice chiefly obtains amongst the Mahommedans, as far as Northern India is concerned. In Bengal little girls usually wear a single pearl or stone pendant suspended from the septum. In the South, specially Orissa and Madras, pendants worn through the septum are very common, as is the case amongst the Lepchas and Paharis of Darjeeling. In general it may be said that nose rings and studs, such as Nath, Besar, Bali and Laung, Nakchanda, Nakchchabi, are as a rule worn through the alae and pendants such as Latkan, Nolak, Bohr etc., through the septum, but there are exceptions to both the systems.

Nose ornaments are gradually going out of favour. For example, the more advanced communities like the Parsis, Beni-Israels, Brahmos, etc., do not use it any longer, although they used to do so not so very long ago. The Nath has practically disappeared in Bengal, where the nose stud for grown ups and the Nolak pendant for little girls are the only nose ornaments in general use, and that also not in the higher strata of society.

And the sooner this system of hideous disfigurement, foreign to the Indian civilization, disappears from this country the better.

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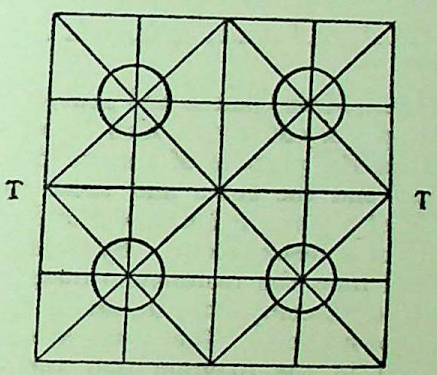
Two Types of Sedentary Games prevalent in British Garhwal.

By Hem Chandra Das-gupta.

Introduction.

The details of the two types of sedentary games that are recorded here were obtained by me from a few local coolies belonging to British Garhwal during my stay in that district in last October in connection with some geological work. The games are known as *bāgh-batti* and *bheri-bakri*.

Bāgh-Batti.



The game of *bāgh-batti* (bāgh=tiger and batti=guti=piece) is a type of tiger-play and two persons, one of whom is the possessor of two pieces representing two tigers and the other of twenty pieces or *battis*, are necessary for playing it. The twenty pieces are to be placed within the four circles and the two *bāghs* at the points T as shown in the diagram. The rules of the game are very similar to those already described by me in connection with the game known as *sher-bakar*[1] with this difference that, in the game of *sher-bakar*, the number of pieces is not twenty but nineteen of which fifteen are equally distributed among 3 circles and only four are placed in the fourth. In all other respects the rules of the two games are the same. Thus, if the tiger jumps over a circle with more *battis* than one and occupies the immediately next vacant cross-point in the same line, only one *batti* may be captured and for the possessor

1. Journ. Asiat. Soc. Bengal, N.S., Vol. XXII, pp. 143–148, 1926.

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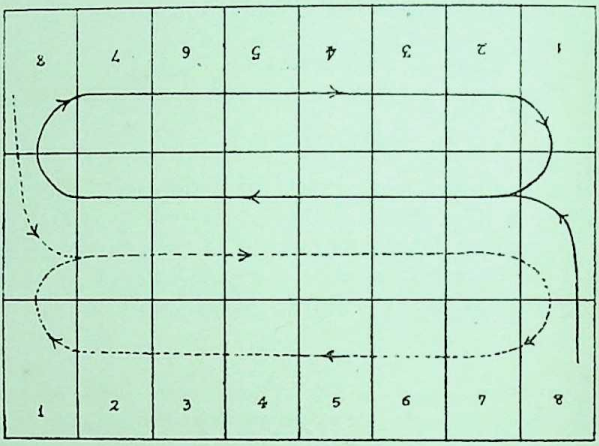
of the *battis* to win the game he has to checkmate the two tigers one immediately after the other.

BHERI-BAKRI.



The game of *bheri-bakri* (sheep and goat) is played by two persons with 16 pieces equally divided between them and 4 pieces of *cowries* for the purpose of throw. The 16 pieces represent the sheep and the goats and those representing the goats are usually of a white colour and those representing the sheep are usually of a black colour. By means of the vertical and the horizontal lines the rectangular-diagram used for the play is divided into 24 compartments and of them 8 belong to each player as shown above. The pieces are arranged in the order as indicated in the diagram and their movement is regulated by the result of the throw of the *cowries*, the result being described as *poā*, *do*, *tin* or *cār*—*i.e.*, the number of points gained—according as the number of *cowries* which show their mouths up after each throw is one, two, three, or four. When no *cowrie* shows its mouth up after a throw, the player gets no point to his credit. After the players have arranged their pieces in the way as indicated above, in the diagram, they begin to throw the *cowries* and when a player gets a *poā* to his credit, he is able to move the piece lying in the compartment marked 8 to the next one lying in the middle row which may be distinguished as the neutral row. After a piece has been moved from its original compartment to that in the neutral row, a player (say A) can move it from one compartment to another, the number of movements being regulated by the number of points gained, *i.e.*, if he has 3 points in his favour, his piece will occupy the third compartment unless it is already occupied by a piece of his adversary B in which case the latter piece will be captured by A whose piece will now

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occupy the compartment thus made vacant. Whoever of the two players succeeds in capturing all the pieces belonging to his adversary is the winner. The rules that have to be observed while playing this game are the following:—

1. A player who has a *poā* to his credit is entitled to have a second throw of the *cowries*.

2. When there is no point to the credit of a player, *i.e.*, when the mouth of no *cowrie* is seen after a throw, the next throw passes on to his adversary.

3. One player can play only with one piece at a time *i.e.*, the piece occupying the compartment No. 8 has to be brought out first and must be captured by the other player before the former player can bring out the piece occupying the 7th compartment of his own row.

4. For all points of one, *i.e.*, *poā*, the requirements of the pieces lying within the player's own row of compartments must be satisfied first and before all the pieces have been shifted from one compartment to another, the piece which is out of the player's row of compartments may not be moved for a throw that gives to the player credit for one point only, *i.e.*, *poā*.

5. No piece may be moved from its original compartment unless the player to whom the compartment belongs has got a *poā* to his credit. Thus if the piece No. 8 belonging to a player be captured and if the piece No 7 has not been previously shifted by him owing to his not having secured already a *poā* necessary for the purpose, it (the piece No. 7) shall be moved only when he succeeds in getting a *poā* to his credit and the other throws in the interval, carrying other values, are of no avail to him.

6. A player's piece, when out of his own row of compartments, has to be moved from right to left in the neutral row and from left to right in that of his adversary. It can never be made to enter the player's own row but must be moved only in the other two rows spirally in the directions as mentioned above and also indicated in the diagram.

7. The pieces of the player are to be moved gradually from a lower number to a higher one and to the neutral zone only from the compartment marked 8.

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Analysis of Race-Mixture in Bengal.

By P. C. MAHALANOBIS.

Introduction.

The problem which I have selected for a preliminary discussion in this paper is the "Analysis of Race-Mixture in Bengal." Dr. Annandale had taken very careful measurements of nearly 300 Anglo-Indians (new style) in Calcutta. He selected a sample of 200 individuals which, he believed, represented true Indo-European mixture and turned over the measurements to me for statistical analysis. I am publishing elsewhere a detailed analysis of these measurements.[1] During the course of my work a very interesting question arose: How are these 200 Anglo-Indians of Calcutta related to the different caste groups of Bengal? Are they more closely allied with the Hindus? or with the Mahomedans? Do they show a greater affinity with the higher castes of Bengal or with the lower castes? Is there any appreciable admixture with the aboriginal tribes in and on the borderland of Bengal? any appreciable resemblance with castes outside Bengal? In other words, can we obtain any idea about the possible composition of the given sample of Anglo-Indians in terms of the broader social and geographical divisions of the inhabitants of Bengal and its neighbourhood?

In order to answer the above questions we must adopt the usual scientific method of proceeding from the known to the unknown. We shall therefore first of all study the geographical and social resemblances shown by typical Bengal castes whose antecedents and present status are fairly well-known. We shall then be in a position to use these results for investigat-

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Note added on the 26th August, 1927. The present paper contains the substance of the Presidential Address delivered before the Anthropological section of the Indian Science Congress in 1925. It was submitted to the Asiatic Society of Bengal in 1925, but the printing was delayed owing to the absence of the author out of India during the greater part of 1926 and 1927.

I have omitted certain personal explanations and also an obituary reference to Dr. Annandale, and have altered the form of the address at a few places, but have otherwise left the contents practically untouched. I have corrected a few arithmetical slips, added a new reference in a footnote, and a short note on the mean values used in this paper (in Appendix II).

[1] Records of the Indian Museum, Vol. 23, 1922.

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ing the social and geographical connexions of the Anglo-Indians.

In this preliminary survey I have used for comparison 30 typical castes of North India for which anthropometric data were published by Risley in his 2 volumes on "Indian Castes and Tribes" (1891). Fortunately practically all the individuals measured by Risley were over 25 years old (i.e. had attained full maturity) so that in a preliminary analysis age-corrections would not be needed. The above 30 castes were selected partly because of their representative character and partly because of the comparatively large size of the samples (usually consisting of about 100 individuals).

The selected castes represent about 6 geographical divisions and 4 or 5 cultural strata. I show below both the geographical as well as the cultural classification.

(A) Geographical Classification.

(1) *Bengal* (*8*). Brahman, Kayastha, Sadgop, Kaibarta, Rajbansi, Pod, Bagdi and Mahomedan.
(2) *Chota Nagpur Tribes* (*7*). Kurmi, Oraon, Santal, Munda, Bhuiya, Mal Pahari [1] and Malè [1].
(3) *Bihar* (*4*). Brahman, Goala, Maghya Dom and Dosadh.
(4) *North-Western Provinces and Oudh* (*5*). Brahman, Kayastha, Goala, Dom and Chamar.
(5) *Punjab* (*3*). Khatri, Pathan, Chuhra.
(6) *Eastern Districts* (*3*). Lepcha, Chakma and Magh.

(B) Cultural Classification.

Cultural classification is a much more complicated affair. The Hindu community does not present in actual fact a regular hierarchy of social order in which every caste can be placed in a definite intermediate position between any two other castes. Social status is again, contrary to orthodox socio-religious theories, not a fixed thing. It is changing, and although changes are on the whole slow it is sometimes found that the relative social position of two castes is interchanged within a fairly short time.

The difficulty becomes much greater when we have to compare and fix the relative position of castes belonging to different provinces. In the absence of direct social contact between two castes belonging to different geographical divisions we are thrown back on a comparison through one or

[1] Malès and Mal Paharis were originally included by Risley under Bengal. Risley's divisions were given in accordance with the administrative arrangements of his own time. Santal Pergana, the district from which the Mal Pahari and Malès were collected really belongs (both geographically as well as culturally) to Chotia Nagpur which is now included in the province of Bihar and Orissa.

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more intermediary castes and a certain amount of indefiniteness is inevitable. Using broad categories such difficulties will however be minimised to a great extent.

In the classification adopted below weight has been given to orthodox theories as expounded in books like Nagendranath Bose's "*Banger Jatiya Itihas*" or Lalmohan Vidyanidhi's "*Sambandha-Nirnaya*" as well as to the actual facts of present day society.

(1) *High Castes* (*6*). Bengal Brahman; Bihar Brahman; N.W.P. Brahman; Bengal Kayastha; N.W.P. Kayastha; Punjab Khatri.

(2) *Middle Castes* (*6*). Bengal Sadgop, Bengal Kaibarta, Bihar Goala, N.W.P. Goala, Bengal Pod, Bengal Rajbansi.

(3) *Low Castes* (*6*). Bengal Bagdi, Bihar Dosadh, Punjab Chuhra, N.W.P. Chamar, Bihar Dom, N.W.P. Dom.

(4) *Chota Nagpur Aboriginal Tribes* (*7*). C.N. Kurmi, C.N. Bhuiya, C.N. Santal, C.N. Oraon, C.N. Munda, Bengal Mal Pahari and Bengal Malè.

(5) *Eastern Tribes* (*3*). Darjeeling Lepcha, Chittagong Chakma and Chittagong Magh.

(6) *Mahomedans* (*2*). Bengal Mahomedan and Punjab Pathan.

For later comparisons I have included (1) High Castes (2) and Middle Castes together under one head as a distinct group of "upper castes," while in certain portions of the work Bengal Mahomedans have been included under "lower castes."

Out of the above 30 castes of north India I have selected the following 7 Bengal castes for detailed analysis: (1) *Brahmans* who represent the highest caste in Bengal. (2) *Kayasthas* who socially and culturally come next to the Brahmans. (3) *Sadgops*, traditionally cowherds, who are recognised as *Jalacharaniya*.[1] (4) *Kaibartas*, originally fishermen, now mainly agriculturists and petty farmers, some of whom are recognised as *Jal-acharaniya*. (5) *Bagdis*, a very low caste almost at the bottom of the social scale, believed to be of aboriginal descent; originally fishermen they are now mostly agricultural labourers or *palki-bearers*. Some of them eat beef and pork although others abstain from prohibited flesh. (6) *Mal Paharis*, a Hinduised section of the Asal Pahari or Malè tribe of Santhal Parganas. They speak a form of corrupt Bengali but their Hinduisation is not yet complete and they are ranked as the lowest of the low. (7) *Mahomedans* from East Bengal.

Brief descriptions of the above castes will be found in Appendix I.

[1] Literally "those whose water can be used," i.e., castes from whose hands water will be taken by Brahmans and other high castes.

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Caste Distances.

My first task now will be to measure the degree of resemblance (and hence presumably the degree of intermixture or convergence) which each of the 7 selected Bengal castes show with each of the other castes belonging to different geographical or different cultural divisions. I have used from 12 to 15 characters (10 absolute measurements and 5 indices) for this purpose.[1] Two castes which differ very largely in physical appearance may be said to be anthropometrically farther apart than two other castes which resemble each other closely. We may in this special sense speak of caste-distances. Two castes which resemble each other closely will have a very small caste distance; on the other hand, castes which are widely different in character will have large caste-distances. The coefficient D (the statistical definition of which is explained in Appendix III) is one such measure of caste-distance. It takes into consideration the average values of the characters concerned but ignores the number of individuals on which such averages are based.

If we wish to give greater weight to samples which comprise a larger number of individuals we may use the "Coefficient of Racial Likeness" used by G. M. Morant and others.[2] I shall call this coefficient C.

The actual values of caste-distances measured by the two coefficients D and C are given in Tables 1–7 for each of the 7 selected Bengal groups.

Each table is arranged according to the magnitude of D. For example, in Table 1 (Bengal Brahmans) castes appearing high up in the table have smaller caste-distances, i.e. resemble the Bengal Brahmans more closely, than castes which appear lower down in the table.

Caste Resemblances.

Let us consider Table 1 (Bengal Brahmans) given on p. 310 for a moment. I shall not trouble you with individual figures but even a cursory glance at Table 1 will show you the very high position of almost all the Bengal castes. The implication is of course that the Bengal Brahmans resemble the other Bengal castes far more closely than they (the Brahmans) resemble castes from outside Bengal.

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[1] A list of the characters used will be found in Appendix II.

[2] Biometrica XIV (1922-23) p. 194. "This is a measure of whether any two races can be considered samples of the same population." It ignores the correlation between mean values of the characters concerned, and assuming equal variabilities for all samples, uses values of average variabilities. The statistical definition of the Coefficient of Racial Likeness has been fully discussed by Prof. Karl Pearson in the *Biometrika* Vol. XVIII, 1926, pp. 105–117.

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We can use a simple positional index (explained in detail in Appendix IV) to give a rough measure of such provincial or geographical resemblance. A positive value of this index indicates a greater resemblance than the average, maximum resemblance being given by an index of +100; a negative value on the other hand shows less than average resemblance, the minimum being an index of -100. The index thus varies between +100 and -100, the value zero showing just average resemblance.

For Brahmans the positional index for Bengal is found to be +78·3, showing the great influence of geographical proximity. We may call such resemblance associated with geographical proximity as "geographical resemblance" for convenience of reference.

Such "geographical resemblance" is however not confined to the province of Bengal alone. It is shown by the other provinces also. For example, the positional index for Bengal Brahmans is, for Bengal +78·3, for Bihar +38·5 and for N.W.P. and Punjab taken together -6·0, showing an effect which clearly decreases with distance.

This is not the only kind of resemblance which we can detect. The effect of cultural affinity is also prominent. For example, the positional index for Brahmans is for the "high castes" of Bengal, Bihar and Punjab +87·2, for "middle castes" +80·0, for "low castes" +18·0, and for "aboriginal tribes" of Chota Nagpur -74·0. There can scarcely be any doubt about the existence of a close association between resemblance in physical appearance and cultural affinity.

Geographical and Cultural Factors.

Summary Table 8, (p. 306) (which gives the positional indices based on serial position) shows at a glance the relative magnitude of the provincial and cultural factors.[1]

Bengal (line 1, Table 8) naturally enough contributes a preponderating share to every caste other than Mal Paharis and Mahomedans. Kayasthas (+95·0), Sadgops (+97·6) and Kaibartas (+96·1) have the highest and an almost equal share, and are thus seen to be typical indigenous castes of Bengal.

Bihar (Table 8, line 2) gives an appreciable share to Brah-

[1] Supplementary Tables (8·1)—(8·4) included in Appendix V, give similar figures based not on the average position of the different castes but on the average values of D and C, and are in substantial agreement with Table 8. In this preliminary survey I have considered it sufficient to restrict my analysis to Table 8, *i.e.*, to serial positions irrespective of the actual magnitude of these coefficients. Speaking generally the same results flow from the other Tables (8·1)—(8·4) given in Appendix V (pp. 331-332).

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TABLE 8.

Positional Indices based on serial position.

Serial No.		Brahman.	Kayastha.	Sadgop.	Kaibarta.	Bagdi.	Malpahari.	Mahomedan.	Anglo-Indian.
	(1) *Provinces.*								
1	Bengal (7 or 8)	+78·3	+95·0	+97·4	+96·1	+63·6	+ 9·5	+48·2	+86·4
2	Bihar (4)	+38·5	+48·0	+42·0	+44·0	+20·0	− 10·0	+82·0	+25·4
3	North-West Provinces (5) ..	−40·2	−51·6	−45·0	−51·5	−50·0	− 18·3	−51·6	**−47·2**
4	Punjab (3)	+50·1	−20·0	−30·1	−38·5	−79·2	−100·0	−12·3	+48·2
5	Chota Nagpur (7 or 6) ..	−74·0	−50·0	−37·6	−19·4	+49·3	+ 82·6	−14·1	−85·2
6	Eastern Districts (3) ..	−48·7	−47·3	−71·5	−77·0	−92·3	− 25·0	−79·2	−25·9
	(2) *All Castes (non-aboriginal).*								
7	Upper (13)	+73·8	+64·7	+60·6	+44·9	+31·4	− 9·1	+37·2	+75·3
8	Lower (7)	+ 0	+ 5·2	+11·7	+16·9	−29·0	+ 1·5	+20·3	− 5·2
9	Total (20)	+80·0	+62·0	+60·0	+47·4	− 2·0	− 52·2	+44·0	+80·0
	(3) *Bengal, Bihar and Punjab.*								
10	High Castes (4)	+87·2	+53·4	+52·0	+42·0	−12·0	− 72·0	+40·0	+79·2
11	Middle ,, (6)	+80·0	+91·6	+92·0	+88·0	+91·6	+ 50·0	+56·6	+76·6
12	Upper ,, (9 or 10) ..	+97·6	+90·5	+85·7	+77·4	+53·9	+ 7·1	+60·0	+96·0
13	Lower ,, (5 or 4) ..	+26·6	+38·3	+37·5	+44·2	−14·0	− 6·0	+58·0	+20·0
14	Total ,, (15)	+96·1	+84·8	+80·0	+86·6	+26·6	− 34·4	+60·9	+90·7
	(4) *Bihar and Punjab.*								
15	Upper Castes (4)	+62·0	+18·0	+ 8·0	+ 2·0	−20·0	− 48·0	+44·0	+57·7
16	Lower ,, (3)	+20·7	+18·4	+13·1	+15·7	−28·0	− 51·2	+61·5	+ 5·9
17	Total ,, (7)	+50·6	+20·8	+11·8	+ 9·0	−27·2	− 57·1	+45·9	+42·6
	(5) *Bihar, N.W.P. and Punjab.*								
18	Upper Castes (7)	+28·2	− 3·9	−10·3	−24·5	−35·1	− 50·5	− 5·2	+21·7
19	Lower ,, (5)	−13·7	−20·0	−16·6	−16·6	−40·3	− 26·7	+15·0	−22·8
20	Total ,, (12)	**+13·7**	**−14·7**	**−14·7**	−28·2	−50·0	− 54·1	+ 5·1	+ 3·3

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mans (+38·5), Bagdis (+20·0), a considerable share to Kayas thas (+48 0), Sadgops (+42·0) and Kaibartas (+44·0), and makes the biggest and predominating contribution to Mahomedans (+82·0).

Castes from N.W.P. (Table 8, line 3) show a very marked and steady dissimilarity with all the castes analysed here. This result is surprising and difficult to explain. If real (i.e. not due to differences in the technique of measurement) it deserves careful investigation.

Punjab (Table 8, line 4) contributes largely to the Brahmans (+50·1) but not to any other caste. The degree of dissimilarity however steadily increases as we pass from Kayasthas (−20·0), Sadgops (−30·1), Kaibartas (−38·5), Bagdis (−79·2) and Mal Paharis (−100). Social status in Bengal thus appears to vary inversely as the amount of dissimilarity with the Punjab castes.

The aboriginal tribes of Chota Nagpur (Table 8, line 5) on the other hand exhibit an opposite but equally steady and systematic gradation. The Brahmans show the greatest dissimilarity (−74·0), then come Kayasthas (−50·0), Sadgops (−37·6), and Kaibartas (−19·4), Bagdis actually show a great deal of resemblance (+49·3), while Mal Paharis (+82·6) are seen to belong to the Chota Nagpur aboriginal group itself. The gradation described above is so regular in its character that it would be hardly an exaggeration to assert that the lower the social standing of a caste in Bengal the greater is its resemblance with the aboriginal tribes of Chota Nagpur, or *vice versa*.

The aboriginal castes from the eastern districts show consistent dissimilarity with every Bengal caste analysed here. This dissimilarity however does not decrease as we go down the social scale, on the contrary actually increases with decreasing social status. We conclude therefore that there is no tendency on the part of the lower castes of Bengal to mix freely with the eastern aboriginal tribes, and that whatever little admixture with them may now exist must have occurred through the higher rather than through the lower castes of Bengal.[1]

We may now consider the influence of cultural divisions. I worked at first with a tri-partite classification: "high castes," "middle castes" and "low castes" but as the total number of castes used here is rather small I am giving the final figures for the "high" and "middle" castes combined under one head: "upper castes."

Taking into consideration all non-aboriginal castes, the positional indices for "upper" and "lower" castes are shown

[1] I should point out however that this result is only tentative: further analysis, particularly of the lower castes of Eastern Bengal, is necessary before a result of such wide implication can be accepted.

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separately in the above Table A, all the figures being taken from Table 8. Figures for Chota Nagpur are included for comparison. The systematic and perfectly regular character of the changes in the value of P as we pass from Brahmins to Mal Paharis is quite remarkable. Resemblance with

TABLE A. POSITIONAL INDICES.

	Brahman.	Kayastha.	Sadgop.	Kaibarta.	Mahomedan.	Bagdi.	Mal Pahari.
All Non-aboriginal Castes.							
"Upper castes" (13)	+73·8	+64·7	+60·6	+44·9	+37·2	+31·4	−9·1
"Lower castes" (7) ..	0	+5·2	+11·7	+16·9	+20·3	−29·0	+1·5
Chota Nagpur Tribes (7)	−74·0	−50·0	−37·6	−19·4	−14·1	+49·3	+82·6

"upper castes" decreases *pari passu* with the increase in resemblance with "lower castes." So that the actual degree of resemblance with either the "upper castes" or with the "lower castes" furnishes a reliable index of social status.[1] Judged by this test (East) Bengal Mahomedans would appear to occupy a position a little below the Kaibartas.

If we take Bihar and the Punjab (Table 8, line 15) together (omitting N.W.P. as it does not contribute anything appreciable), we can gain some idea about the extra-provincial contribution from the north-west. The "upper castes" (now including Pathans) contribute a very large share to Brahmans (+62·0), a moderate share to Mahomedans (+44·0), and only a small and decreasing share to Kayasthas (+18·0), Sadgops (+8·0) and Kaibartas (+2·0), and actually show moderate dissimilarity with Bagdis (−20·0) and great dissimilarity with Mal Paharis (−44·0). The lower castes contribute very largely to Mahomedans (+61·5), and only slightly to Brahmans (+20·7), Kayasthas (+18·4), Sadgops (+13·1) and

[1] The chief reason of a marked dissimilarity between Bagdis and "lower castes" is probably this. My list includes only one low caste from Bengal e.g. Bagdis; in comparing with Bagdis this of course goes out, so that *for Bagdis* the "low castes" group contains castes from outside Bengal only, and the dissimilarity noticed here is probably largely due to the effect of geographical distance.

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Kaibartas (+15·7); Bagdis (−28·0) and Mal Paharis (−51·2) again show moderate and great dissimilarity respectively.

The total contribution of Bihar and the Punjab (Table 8, line 17) shows interesting contrasts with the contribution of Chota Nagpur (Table 8, line 5). Brahmans show the greatest resemblance with Bihar and the Punjab (+50·6) and the greatest dissimilarity with Chota Nagpur (−74·0). Kayasthas, Sadgops and Kaibartas exhibit decreasing resemblance with Bihar and the Punjab (+20·8, +11·8, +9 0. respectively), and at the same time decreasing dissimilarity with Chota Nagpur (−50·0, −37·6, and −19·4 respectively). Bagdis show moderate dissimilarity (−27·2) with the northern provinces and a moderate similarity (+49·3) with Chota Nagpur, while the Mal Paharis show the greatest dissimilarity with the northern provinces (−51·2), and the greatest similarity with Chota Nagpur (+82·6). The case of the Mahomedans is the only exception; they show large resemblances with Bihar and the Punjab (+44·0), and only slight dissimilarity with Chota Nagpur (−14·1). It should be noted, however, that the Mahomedans show greater resemblance with the "lower castes," and in this respect offer a marked contrast to the Brahmans who derive by far the greater part of their contribution from the upper castes.

We may then say generally that the greater the similarity with the castes (particularly with the upper castes) of Bihar and the Punjab the greater is the dissimilarity with the aboriginal tribes of Chota Nagpur and *vice versa*. The variation of resemblance with Chota Nagpur is however more strongly marked than that with Bihar and the Punjab, and this greater intensity may probably be ascribed to the greater geographical proximity.

The results for Bengal, Bihar and the Punjab (as also for Bihar, N.W.P. and the Punjab) given in Table 8. lines 14–20 taken together corroborate the same thing. The total for all castes (excluding aboriginal tribes) given in Table 8, line 9 shows at a glance the proportions of caste admixture in the different castes; there is again a perfectly regular gradation from Brahmans (+80·0) to Mal Paharis (−52·2).

Analysis of Bengal Castes.

We may now rapidly review the results for each caste separately.

Brahmans (Table 1). The Bengal Brahmans stand out prominently as the only caste in Bengal which shows definite evidence of resemblance with the Punjab and also a substantial amount of resemblance with "upper castes" outside Bengal.[1]

[1] The position of the three Punjab castes is surprisingly high (4th, 9th, 12th). The resemblance between the Bengal Brahmans and Punjab

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The Brahmans also show marked dissimilarity with the aboriginal tribes of Chota Nagpur and considerable dissimilarity with the eastern tribes.[1] At the same time it is evident that considerable intermixture with the other castes (particularly the upper castes) of Bengal has occurred so that the Brahmans may now be looked upon as a true Bengal caste.

One very striking thing in Table 1 is the close association between resemblance with the Brahmans and social status in Bengal. The proposition : "the higher the social status the

TABLE 1.

Bengal Brahman (100).

Serial Order.	Province and Caste.	Social Status.	n	D	C
1	Bengal Kayastha ..	High	100	0·236	10·8
2	,, Sadgop ..	Middle	48	0·319	9·3
3	,, Kaibarta ..	,,	100	0·351	16·5
4	Punjab Khatri ..	High	60	0·413	14·5
5	Bengal Pod ..	Middle	100	0·451	21·5
6	Bihar Brahman ..	High	67	0·496	18·9
7	,, Goala ..	Middle	100	0·585	28·2
8	Bengal Mahomedan	Lower	185	0·595	37·2
9	Punjab Chuhra ..	,,	80	0·641	27·5
10	Bengal Rajbansi ..	Middle	100	0·693	33·6
11	N.W.P. Brahman ..	High	100	0·801	39·0
12	Punjab Pathan ..	Upper	80	0·804	34·7
13	Bihar Dom ..	Lower	100	0·841	41·0
14	Bengal Bagdi ..	,,	99	0·857	41·1
15	Bihar Dosadh ..	,,	100	1·155	56·7
16	Darjeeling Lepcha ..	Abor.	57	1·124	39·8
17	C.N. Kurmi ..	,,	100	1·284	63·2
18	N.W.P. Dom ..	Lower	100	1·397	68·8
19	C.N. Oraon ..	Abor.	100	1·411	69·5
20	N.W.P. Kayastha ..	High	100	1·454	71·7
21	C.N. Santal ..	Abor.	100	1·781	88·1
22	Chittagong Magh ..	,,	100	1·792	88·6
23	N.W.P. Goala ..	Middle	100	1·875	92·8
24	C.N. Bhuiya ..	Abor.	100	1·998	98·8
25	,, Munda ..	,,	100	2·035	100·8
26	Chittagong Chakma	,,	100	2·540	126·0
27	(C.N.) Mal Pahari ..	,,	100	2·549	126·4
28	N.W.P. Chamar ..	Lower	100	2·687	133·4
29	(C.N.) Malè ..	Abor.	100	2 983	148·2

N.B.—The Probable Error of C (C.R.L.) is $\pm$0·23.

Pathans (D=0·804, C=34·7) is much greater than that between the Pathans and the Bengal Mahomedans (D=1·828, C=101·0), and is actually only a little less than that between the Bengal Brahmans and the Bengal Mahomedans (D=0.595, C=37·2).

[1] The Brahmans offer (Table 8) a complete contrast to the aboriginal tribes of Chota Nagpur (−74·0) and also to the tribes of the east (−48·0).

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greater is the resemblance with the Bengal Brahmans" is almost literally true for every province. For example, the order of resemblance in the Punjab is Khatri (4th), Chuhra (9th), both Hindu castes, and then Pathan (12th). In Bihar the order is : Brahman (6th), Goala (7th), Dom (13th) and Dosadh (15th).

In Bengal itself the upper castes Kayasthas (1st), Sadgop (2nd), Kaibartas (3rd) and Pod (5th) occupy the first few places in the strict order of their social precedence. Then come the Mahomedans (8th) and after the Mahomedans, Rajbansi (10th) and Bagdi (14th). The inference that intermixture with Bengal Brahmans has varied directly as the cultural proximity of the caste concerned can scarcely be resisted.

Among the aboriginal tribes of Chota Nagpur, Kurmis show the greatest resemblance with Bengal Brahmans. This is not surprising as we know that the Kurmis are culturally nearest to the Hindus. Then come Oraon, Santal, Bhuiya, Munda and finally Mal Pahari and Malè.[1] The eastern tribes come in the order: Darjeeling Lepcha, Chittagong Magh and Chittagong Chakma.[2]

The present analysis seems to show that the Brahmans in Bengal can justifiably claim their descent partly from the Punjab and the upper provinces of Northern India. Considerable intermixture in Bengal (or convergence under climatic selection) must also have occurred, particularly with the upper castes who are culturally nearer to the Brahmans. The Brahmans do not appear to have intermixed appreciably with the eastern tribes, and are practically free from racial contact with the aboriginal tribes of Chota Nagpur.

Other high castes of Bengal. The Kayasthas, the Sadgops, and the Kaibartas all appear to be castes originally indigenous to Bengal. They show the same amount of moderate resemblance with Bihar but do not show any resemblance with the Punjab.

On the whole resemblance with the aboriginal tribes of Chota Nagpur is not appreciable, but the regular and systematic character of the variation indicates that intermixture with the Chota Nagpur tribes has taken place with increased frequency as we go down the social scale.

Kayasthas (Table 2). They show great resemblance with all the Bengal castes, particularly with the "middle castes" of Bengal, indicating either close intermixture, or surreptitious absorption through the unauthorised adoption of Kayastha

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[1] The chief differences with the Chota Nagpur tribes occur in nose form and size, stature and the fronto-zygomatic index.

[2] The greatest differences occur in the bizygomatic breadth, fronto-zygomatic index and stature, and for the two Chittagong tribes also in nasal breadth and nasal index.

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TABLE 2.

Bengal Kayastha (100).

Serial Order.	Province and Caste.	Social Status.	n	D	C
1	Bengal Sadgop ..	Middle	48	0·079	1·6
2	,, Kaibarta ..	,,	100	0·155	6·7
3	,, Pod ..	,,	100	0·174	7·7
4	,, Brahman ..	High	100	0·234	10·7
5	,, Mahomedan	Lower	185	0·304	18·5
6	Bihar Goala ..	Middle	100	0·389	18·4
7	,, Brahman ..	High	67	0·416	15·7
8	Bengal Rajbansi ..	Middle	100	0·426	20·3
9	,, Bagdi ..	Lower	99	0·495	23·3
10	C.N. Kurmi ..	Abor.	100	0·833	40·6
11	Bihar Dosadh ..	Lower	100	0·849	41·4
12	,, Dom ..	,,	100	0·889	43·4
13	Punjab Khatri ..	High	60	0·909	33·1
14	Darjeeling Lepcha ..	Abor.	57	0·976	34·4
15	Punjab Chuhra ..	Lower	80	1·006	43·7
16	C.N. Oraon ..	Abor.	100	1·040	49·2
17	N.W.P. Brahman ..	High	100	1·091	53·5
18	,, Kayastha ..	,,	100	1·295	63·7
19	C.N. Santal ..	Abor.	100	1·406	69·3
20	N.W.P. Dom ..	Lower	100	1·417	69·8
21	C.N Bhuiya ..	Abor.	100	1·438	70·9
22	N.W.P. Goala ..	Middle	100	1·486	73·3
23	Chittagong Magh ..	Abor.	100	1·501	74·0
24	C.N. Munda ..	,,	100	1·629	80·4
25	Punjab Pathan ..	Upper	80	1·716	75·2
26	(C.N.) Mal Pahari ..	Abor.	100	2·045	101·2
27	Chittagong Chakma	,,	100	2·290	113·5
28	(C.N.) Malè ..	,,	100	2·396	118·8
29	N W.P. Chamar ..	Lower	100	2·437	120·8

N.B.—The Probable Error of C (C.R.L.) is $\pm$ 0·28.

names and habits by persons belonging to lower castes, or convergence under climatic selection. In fact they appear to be more closely connected with the Sadgops (1st), Kaibartas (2nd) and Pods (3rd) than with the Brahmans (4th). Resemblance with Mahomedans (5th) is also fairly close.

Omitting the Brahmans the rule about association between social status and order of resemblance is strictly preserved in Bengal (Sadgop, Kaibarta, Pod, Mahomedan, Rajbansi and Bagdi). In Bihar, Goala takes precedence over the Brahmans, otherwise the rule is again obeyed. In N.W.P. and the Punjab also the order of social status is faithfully reproduced in the table for caste resemblance with the only exception of N.W.P. Goala. The Kayasthas show less dissimilarity with the aboriginal tribes (—50.0) than the Brahmans (—74·0), but the resemblance is negligible (Table 8, line 5).

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The Bengal Kayasthas thus appear to be an indigenous caste showing close resemblance with other Bengal castes, fairly close connections with Bihar but not with N.W.P. or the Punjab. They are more closely connected with the "middle" castes than with the Brahmans,[1] but are practically free from intermixture with the aboriginal tribes.

Sadgops (Table 3). There is very little difference between the Sadgops and the Kayasthas on the whole. The Sadgops

TABLE 3.

Bengal Sadgop (48).

Serial Order.	Province and Caste.	Social Status.	n	D	C
1	Bengal Pod ..	Middle	100	0·033	0·1
2	,, Kaibarta ..	,,	100	0·064	1·1
3	,, Kayastha ..	High	100	0·079	1·6
4	,, Mahomedan	Lower	185	0·195	6·4
5	,, Rajbansi ..	Middle	100	0·239	6·7
6	Bihar Goala ..	,,	100	0·273	7·8
7	Bengal Bagdi ..	Lower	99	0·302	8·6
8	,, Brahman ..	High	100	0·319	9·3
9	Bihar Brahman ..	,,	67	0·349	8·7
10	C.N. Kurmi ..	Abor.	100	0·588	18·0
11	Bihar Dom ..	Lower	100	0·602	18·5
12	C.N. Oraon ..	Abor.	100	0·649	20·0
13	Bihar Dosadh ..	Lower	100	0·672	20·8
14	Punjab Khatri ..	High	60	0·807	20·5
15	N.W.P. Brahman ..	,,	100	0·831	25·9
16	Punjab Chuhra ..	Lower	80	0·862	24·8
17	N.W.P. Dom ..	,,	100	0·945	29·6
18	C.N. Santal ..	Abor.	100	0·956	30·0
19	N.W.P. Kayastha ..	High	100	0·986	30·9
20	Darjeeling Lepcha ..	Abor.	57	1·019	25·5
21	C.N. Bhuiya ..	,,	100	1·022	32·1
22	,, Munda ..	,,	100	1·131	35·6
23	N.W.P. Goala ..	Middle	100	1·175	37·1
24	Chittagong Magh ..	Abor.	100	1·200	37·9
25	(C.N.) Mal Pahari ..	,,	100	1·527	48·5
26	,, Malé ..	,,	100	1·797	57·2
27	Punjab Pathan ..	Middle	80	1·828	53·8
28	N.W.P. Chamar ..	Lower	100	1·896	60·4
29	Chittagong Chakma	Abor.	100	2·005	64·0

N.B.—The Probable Error of C (C.R.L.) is $\pm 0{\cdot}28$.

show slightly greater contact with the "lower castes," and also with the aboriginal tribes of Chota Nagpur. Resemblance

[1] In fact on the data here analysed Bengal Kayasthas would seem to be more closely allied to the "middle" rather than the "higher" castes of North India. This result is a little surprising and deserves further study.

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with eastern tribes is however less pronounced than in the case of both Brahmans and Kayasthas.

The order of resemblance shows very interesting reversals in the order of social precedence in Bengal. We have already seen that the Kayasthas show the greatest resemblance with Sadgops but the latter show greater resemblance with both Pods and Kaibartas than with Kayasthas. Contact with Mahomedans is also very close but the position of Bengal Brahmans (4th in the list for Kayasthas) is much lower (8th for Sadgops).

Kaibartas (Table 4.) The Kaibartas show as much intermixture within Bengal and as close a contact with Bihar as Kayasthas and Sadgops. There is however greater dissi-

TABLE 4.

Bengal Kaibarta (100).

Serial Order.	Province and Caste.	Social Status.	n	D	C
1	Bengal Pod ..	Middle	100	0·061	2·0
2	,, Sadgop ..	,,	48	0·065	1·1
3	,, Bagdi ..	Lower	99	0·122	5·0
4	,, Mahomedan	,,	185	0·142	8·1
5	,, Kayastha ..	High	100	0·155	6·7
6	Bihar Goala ..	Middle	100	0·192	8·6
7	Bengal Rajbansi ..	,,	100	0·207	9·3
8	Bihar Brahman ..	High	67	0·356	13·3
9	Bengal Brahman ..	,,	100	0·365	17·2
10	C.N. Kurmi ..	Abor.	100	0·375	17·7
11	Bihar Dosadh .	Lower	100	0·429	20·4
12	C.N. Oraon ..	Abor.	100	0·430	20·5
13	Bihar Dom ..	Lower	100	0·472	22·6
14	C.N. Santal ..	Abor.	100	0·703	34·1
15	Punjab Chuhra ..	Lower	80	0·727	31·3
16	C.N. Bhuiya ..	Abor.	100	0·728	35·4
17	Punjab Khatri ..	High	60	0·733	26·5
18	C.N. Munda ..	Abor.	100	0·811	39·5
19	N.W.P. Dom ..	Lower	100	0·827	40·3
20	,, Brahman ..	High	100	0·833	40·6
21	Darjeeling Lepcha ..	Abor.	57	0·846	29·7
22	N.W.P Kayastha ..	High	100	0·934	45·7
23	,, Goala ..	Middle	100	1·004	49·2
24	(C.N.) Mal Pahari ..	Abor.	100	1·163	57·1
25	Chittagong Magh ..	,,	100	1·239	60·9
26	(C.N.) Malè ..	,,	100	1·414	69·7
27	N.W.P. Chamar ..	Lower	100	1·646	81·3
28	Punjab Pathan ..	Middle	80	1·819	79·8
29	Chittagong Chakma	Abor.	100	1·965	97·2

N.B.—The Probable Error of C (*C.R.L. is* ±0·28).

milarity with N.W.P. and the Punjab. They show (Table 8) less affinity with upper "castes" (+44·9) than both Kayasthas

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(+64·7) and Sadgops (+60·6) and also greater resemblance with "lower castes," much less dissimilarity with the aboriginal tribes of Chota Nagpur (−19·4), but less contact[1] with the eastern tribes (−77·0).

The order of resemblance again shows interesting reversals. Bengal Pods show the greatest resemblance with the Kaibartas, next come Sadgops, Bagdis and Mahomedans, indicating that considerable intermixture must have occurred with low castes like Bagdis as well as with Mahomedans. Naturally enough Brahman comes last. In Bihar, the Goala gets precedence over the Brahman, and the Dosadh over the Dom. In Chota Nagpur the order Kurmi, Oraon, Santal, Bhuiya, Mal Pahari and Malè, and in eastern districts the order Lepcha, Magh, Chakma are still preserved. N.W.P. Dom is now above N.W.P. Brahmans, otherwise the order remains the same. Punjab Chuhra (a low caste) is also now higher than the Khatri (a higher caste). All these of course merely point to a close affinity with the lower castes of all the provinces.

Bagdis (Table 5). While Brahmans, Kayasthas, Sadgops and Kaibartas show a natural gradation and may be classed as true Bengal castes, Bagdis exhibit a number of peculiarities. First of all although considerable intermixture within Bengal is indicated, positional index for Bengal (Table 8) being (+63·6), it is much less than what we found to be the case for the other four castes (+78·3, +95·0, +97·4 and +96·1 for Brahmans, Kayasthas, Sadgops and Kaibartas respectively). Evidently Bagdis contain considerable admixture from outside. Contribution of Bihar is comparatively small (P = +20·0) while N.W.P. (−50·0) and Punjab (−79·2) show great dissimilarity.[2] We find however that the contribution of Chota Nagpur is very large (P = +49·1).

In Bengal, Kaibartas (1st) show the greatest resemblance with the Bagdis, and then Rajbansi (3rd) and Sadgops (4th). Kayasthas (10th) and still more so Brahmans (20th) occupy low positions indicating comparatively little intermixture. Resemblance with Mahomedans (11th) is also slight.

The Santals occupy the 2nd position showing a very close resemblance indeed. Next come Mundas (6th), Kurmi (8th), Oraon (9th) and Bhuiya (12th)—the order being now quite different from the one we found for the higher Hindu castes.

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[1] Chief differences with Bihar occur in bi-zygomatic breadth, with Chota Nagpur in nose size and form, with N.W.P. and with the Punjab in cephalic index, cephalic breadth and fronto-zygomatic index. The eastern tribes differ considerably in bi-zygomatic breadth and cephalic breadth and less in nasal and cephalic index.

[2] The greatest difference occurs in height from vertex to chin and vertico-cephalic index.

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TABLE 5.

Bengal Bagdi (99).

Serial Order.	Province and Caste.	Social Status.	n	D	C
1	Bengal Kaibarta* ..	Middle	100	0·123	5·2
2	C.N. Santal ..	Abor.	100	0·262	12·1
3	Bengal Rajbansi ..	Middle	100	0·266	12·3
4	,, Sadgop* ..	,,	48	0·303	8·8
5	Bihar Goala* ..	,,	100	0·305	14·3
6	C.N. Munda ..	Abor.	100	0·329	15·5
7	Bengal Pod ..	Middle	100	0·421	20·1
8	C.N. Kurmi ..	Abor.	100	0·455	21·8
9	,, Oraon ..	,,	100	0·456	21·9
10	Bengal Kayastha* ..	High	100	0·495	23·8
11	,, Mahomedan	Lower	185	0·539	28·3
12	C.N. Bhuiya ..	Abor.	100	0·540	26·1
13	Bihar Brahman* ..	High	67	0·652	27·3
14	C.N. Mal Pahari ..	Abor.	100	0·687	33·5
15	Bihar Dom ..	Lower	100	0·703	35·4
16	C.N. Malé ..	Abor.	100	0·771	37·7
17	Bihar Dosadh ..	Lower	100	0·802	39·2
18	N.W.P. Dom* ..	,,	100	0·829	40·6
19	,, Goala* ..	Middle	100	0·902	44·3
20	Bengal Brahman* ..	High	100	0·910	44·7
21	N.W.P. Kayastha ..	,,	100	0·952	46·8
22	,, Brahman* ..	,,	100	0·985	48·4
23	Punjab Khatri ..	,,	60	1·072	39·0
24	,, Chuhra ..	Lower	80	1·155	50·0
25	N.W.P. Chamar* ..	,,	100	1·437	71·1
26	Darjeeling Lapcha ..	Abor.	57	1·446	51·3
27	Chittagong Magh ..	,,	100	1·455	72·0
28	,, Chakma	,,	100	2·201	109·4
29	Punjab Pathan ..	High	80	2·975	130·5

N.B.—The Probable Error of C (C.R.L.) is $\pm 0{\cdot}25$ *; for castes marked with an asterisk it is* $\pm 0{\cdot}28$.

The Bagdis thus present a very mixed character. Even if the original stock was indigenous to Bengal very considerable admixture with the aboriginal tribes of Chota Nagpur (particularly with the Santals) must have taken place subsequently. They also show moderate amount of resemblance with the lower castes of Bihar but no connexions with the eastern tribes.[1]

Mal Paharis (Table 6). The Mal Paharis do not belong to Bengal at all although a considerable amount of intermixture with the Bagdis (5th), Rajbansis (6th), Pods (7th) and Kaibartas (9th) is indicated by the comparatively high position occupied by these castes. The resemblance with Chota Nagpur

[1] The dissimilarity is greatest in cephalic breadth, bi-zygomatic breadth, height from vertex to chin, and in cephalic, nasomalar and fronto-zygomatic indices.

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tribes is strikingly close (P = +82·6, Table 8) and leaves little doubt that Mal Paharis form one of the typical aboriginal tribes of Chota Nagpur.

TABLE 6.

(*C.N.*) *Mal Pahari* (100).

Serial Order.	Province and Caste.	Social Status.	n	D	C
1	(C.N.) Malé* ..	Abor.	100	0·035	0·7
2	C.N. Bhuiya* ..	,,	100	0·065	2·2
3	,, Munda ..	,,	100	0·191	8·5
4	,, Santal ..	,,	100	0·240	11·0
5	Bengal Bagdi ..	Lower	99	0·687	32·8
6	,, Rajbansi ..	Middle	100	0·864	42·2
7	,, Pod ..	,,	100	0·991	48·5
8	Bihar Goala* ..	,,	100	1·097	53·8
9	Bengal Kaibarta* ..	,,	100	1·164	57·2
10	C.N. Oraon ..	Abor.	100	1·186	58·3
11	N.W.P. Dom* ..	Lower	100	1·223	60·2
12	Chittagong Magh ..	Abor.	100	1 264	62·2
13	C.N. Kurmi ..	,,	100	1·312	64·6
14	N.W.P. Goala* ..	Middle	100	1·370	67·5
15	,, Chamar* ..	Lower	100	1·481	73·0
16	Bengal Sadgop* ..	Middle	48	1·532	48·6
17	Bihar Dom ..	Lower	100	1·646	81·3
18	Chittagong Chakma	,,	100	1·668	82·4
19	Bihar Brahman* ..	High	67	1·829	72·3
20	Bengal Mahomedan	Lower	185	1·867	119·0
21	Bihar Dosadh ..	,,	100	1·885	93·2
22	N.W.P. Kayastha*	High	100	1·932	95·6
23	Bengal Kayastha* ..	,,	100	2·045	101·2
24	N.W.P. Brahman*	,,	100	2·177	107·8
25	Darjeeling Lapcha ..	Abor.	57	2·283	81·9
26	Bengal Brahman* ..	High	100	2·633	130·6
27	Punjab Chuhra ..	Lower	80	2·814	123·9
28	,, Khatri ..	High	60	2·866	106·5
29	,, Pathan ..	Middle	80	3·774	166·6

N.B.—The Probable Error of C (C.R.L.) is ±0·25 *; for castes marked with an asterisk it is* ±0·28.

The resemblance between Mal Paharis and Malès is very close, so much so that it is practically impossible to distinguish between the two. They show very little resemblance with the Bengal Brahmans; the biggest differences occur in nasal index, nasal breadth, fronto-zygomatic index, nasal height, stature, frontal breadth, and height from vertex to chin. It is significant that the Malè and the Mal Pahari resemble each other closely in the very characters in which they both differ most from the Brahmans, i.e., in nose form and size, stature and frontal breadth.

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There is practically no connexion with Bihar. There is great dissimilarity with both N.W.P.[1] and the Punjab[2] as well as with the two Chittagong tribes Chakma and Magh[3] and with Darjeeling Lepchas.[4]

We therefore conclude that the Mal Paharis represent a true aboriginal tribe from Chota Nagpur, which shows slight admixture with some of the lower castes of Bengal. They have no resemblance with the castes of Bihar, N.W.P., the Punjab nor with the eastern tribes.

Mahomedans (Table 7). The Bengal (or rather East Bengal) Mahomedans do not appear to be a purely indigenous group. Although they show signs of considerable intermixture (Table 8) within Bengal (P = +48·2), a large number were probably originally derived from Bihar (P = +82·0). Dissimilarity with Chota Nagpur is less pronounced (−14·1) than in the case of the upper castes of Bengal, but dissimilarity with N.W.P. is just as clearly marked. Although the Mahomedans in the present sample all come from East Bengal they do not show any resemblance with the eastern tribes (P = −79·2). The Punjab also does not show any resemblance (P = −12·3).

It is rather significant that the order of resemblance within a province has now no connexion with the order of social precedence. For example, in Bengal the order is: Kaibarta, Sadgop, Kayastha, Bagdi, Brahman and Rajbansi. In Bihar: Goala, Dom, Dosadh and Brahman. In N.W.P.: Dom, Brahman, Kayastha, Goala, and in the Punjab: Chuhra, Khatri, Pathan.

On the whole Mahomedans show pronounced resemblance with "lower castes." In fact from the relative amount of resemblance with "upper" and "lower" castes they would seem to occupy culturally a position which is a little lower than the Kaibartas.

The East Bengal Mahomedans appear to have been derived to a large extent from Bihar particularly from the lower castes They have intermixed extensively with the "middle" and "lower" castes of Bengal and also to a smaller extent with one or two aboriginal tribes of Chota Nagpur, but do not show any connexions with N.W.P. nor with the Punjab Pathans. In spite of geographical proximity they do not appear to have had any relations with the eastern tribes.

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[1] Chiefly in nasal width, height from vertex to chin, nasal index and vertico-cephalic index.

[2] In all characters other than head length, head breadth and cephalic index.

[3] Chiefly in cephalic breadth, height from vertex to chin, cephalic index and to a smaller extent in nasal length and nasal index.

[4] Very considerably in nose length, nose width and nasal index and to a smaller extent in head breadth and cephalic index.

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TABLE 7.

Bengal Mahomedan (185).

Serial No.	Province and Caste.	Social Status.	n	D	C
1	Bihar Goala* ..	Middle	100	0·107	5·9
2	Bengal Kaibarta* ..	,,	100	0·108	6·0
3	Bihar Dom ..	Lower	100	0·173	10·2
4	C.N. Kurmi ..	Abor.	100	0·183	10·8
5	Bengal Sadgop* ..	Middle	48	0·199	6·6
6	Bihar Dosadh ..	Lower	100	0·232	14·0
7	Bengal Kayastha* ..	High	100	0·303	18·6
8	C.N. Oraon ..	Abor.	100	0·310	19·1
9	Bihar Brahman* ..	High	67	0·374	17·4
10	Bengal Bagdi ..	Lower	99	0·533	33·3
11	,, Brahman* ..	High	100	0·588	37·1
12	Punjab Chuhra ..	Lower	80	0·743	40·4
13	,, Khatri ..	High	60	0·757	33·3
14	Bengal Rajbansi ..	Middle	100	0·809	51·5
15	C.N. Santal ..	Abor.	100	0·888	56·6
16	,, Munda ..	,,	100	0·977	62·4
17	N.W.P. Dom* ..	Lower	100	1·033	66·0
18	,, Brahman* ..	High	100	1·196	76·6
19	Bengal Pod ..	Middle	100	1·223	78·4
20	Darjeeling Lepcha ..	Abor.	57	1·351	57·9
21	N.W.P. Kayastha ..	High	100	1·457	93·5
22	,, Goala* ..	Middle	100	1·460	93·8
23	C.N. Malé ..	Abor.	100	1·542	99·3
24	,, Bhuiya ..	,,	100	1·815	116·8
25	Punjab Pathan ..	Middle	80	1·828	101·0
26	(C.N.) Mal Pahari ..	Abor.	100	1·868	120·2
27	Chittagong Magh ..	,,	100	1·878	120·9
28	N.W.P. Chamar* ..	Lower	100	2·117	136·3
29	Chittagong Chakma	Abor.	100	2·671	172·3

N.B.—The Probable Error of C (C.R.L.) is $\pm 0{\cdot}25$ *; for castes marked with an asterisk it is* $\pm 0{\cdot}28$.

Summary of Analysis for Bengal Castes.

Summing up we find that intermixture within Bengal, i.e., intra-provincial intermixture has varied with the degree of cultural proximity, so that for Brahmans the amount of intermixture with other castes has been in proportion to the social standing of the caste concerned. Influence from outside Bengal, i.e., inter-provincial intermixture has followed two well-defined and clearly distinguished streams, one from the castes of northern India (chiefly from Bihar and the Punjab), and the other from the aboriginal tribes of Chota Nagpur. The influence of the northern Indian castes decreases and that of the aboriginal tribes of Chota Nagpur increases as we go down the social scale. In fact these two streams exhibit a marked opposition: the greater the resemblance with northern

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India the greater being the dissimilarity with the aboriginal tribes and *vice versa.*

None of the castes analysed here show much resemblance with any of the aboriginal tribes of the east. In fact so far as the present analysis goes the Bengal groups appear to show a definite repugnance (which is still more strongly marked for the lower castes and the Mahomedans) against intermixing with the eastern aboriginal tribes.

Influence of North-Western Provinces is also surprisingly small and requires further investigation.

Brahmans, Kayasthas, Sadgops and Kaibartas come out as true Bengal Hindu castes. The Brahman alone can justifiably claim definite connexions with upper India, particularly with the Punjab. The Kayastha, the Sadgop and the Kaibarta all show comparatively little resemblance with upper India, and exhibit a systematic gradation of decreasing influence from North India and increasing intermixture with the Chota Nagpur aboriginal tribes. Bagdis appear to be a highly mixed group of which the basic stock was probably indigenous to Bengal but which subsequently very considerably intermixed with the aboriginal tribes of Chota Nagpur (particularly with the Santals) and also partly with the lower castes of Bihar. Mahomedans also show a highly mixed character. They appear to be originally largely derived from Bihar but have intermixed extensively in Bengal; they do not show any resemblance with the Punjab Pathans.

The above results are not at all startling, and with the exception of the N.W.P., are just what one would expect from the known social history of the castes concerned. The results of our analysis are thus in general agreement with the actual facts of the ethnic situation. This is re-assuring and gives us confidence in using the present method for the analysis of the Anglo-Indian sample.

Analysis of the Anglo-Indian sample.

We may now go back to our original problem, and in the light of the results described above attempt a provisional analysis of the Anglo-Indian sample. Using 7 characters, *e.g.*, head length, head breadth, nasal length, nasal breadth, cephalic index, nasal index and stature,[1] I find the caste-distances shown in the following Table 9 and positional indices shown in Col. 8 of Table 8.

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[1] I regret I have not been able to use other characters in the present analysis owing to uncertainty about the comparability of the measurements: work is however proceeding and I hope to publish a more detailed analysis in the near future. Results based on only 7 characters are of course only tentative.

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TABLE 9.

Anglo-Indians (200).

Serial Order.	Province and Caste.	Social Status.	n	D^2	C^2
1	Bengal Brahman ..	High	100	·022	0·5
2	,, Kyastha ..	,,	100	·034	1·3
3	,, Sadgop ..	Middle	48	·082	2·2
4	Bengal Pod ..	Middle	100	·204	12·6
5	Punjab Pathan ..	Upper	80	·208	10·9
6	Bengal Kaibarta ..	,,	100	·222	13·8
7	Bengal Mahomedan	..	185	·298	27·6
8	Bihar Brahman ..	High	67	·303	14·2
9	Bihar Goala ..	,,	100	·319	20·3
10	Punjab Khatri ..	High	60	·470	20·7
11	Bengal Rajbansi ..	Middle	100	·512	33·1
12	Punjab Chuhra ..	Lower	80	·678	37·7
13	Darjeeling Lepcha ..	Abor.	57	·758	32·6
14	Bengal Bagdi ..	,,	99	·776	50·4
15	Bihar Dosadh ..	,,	100	·857	56·1
16	N.W.P. Brahman ..	High	100	·871	57·1
17	Bihar Dom ..	,,	100	·932	61·1
18	C.N. Kurmi ..	Abor.	100	1·029	67·6
19	Chittagong Magh ..	Abor.	100	1·160	76·3
20	N.W.P. Dom ..	Lower	100	1·239	81·6
21	,, Kayastha ..	,,	100	1·331	87·7
22	N.W.P. Goala ..	Middle	100	1·479	97·6
23	C.N. Oraon ..	,,	100	1·533	101·2
24	C.N. Santal ..	Abor.	100	1·968	130·2
25	Chittagong Chakma	,,	100	2·052	135·8
26	C.N. Bhuiya ..	,,	100	2·201	145·7
27	,, Munda ..	,,	100	2·524	167·3
28	N.W.P. Chamar ..	Lower	100	2·832	187·8
29	(C.N.) Mal Pahari ..	,,	100	3·094	205·3
30	C.N. Malé ..	,,	100	3·633	241·2

N.B.—The Probable Error of C (C.R.L.) is $\pm$ 0·54.

It will be noticed that the positional indices for the Anglo-Indians (Table 8) are very similar to those for the Bengal Brahmans. The chief differences are the slightly greater resemblance with Bihar, and the markedly less dissimilarity with the eastern tribes shown by the Anglo-Indians.

Intermixture within Bengal is very great: resemblance with both Brahmans[1] and Kayasthas being strikingly close. The order of resemblance within Bengal (Brahman, Kayastha, Sadgop, Pod, Kaibarta, Mahomedan, Rajbansi and Bagdi) very accurately reproduces the order of social precedence.

[1] In fact the Bengal Brahmans and the Anglo-Indians can scarcely be distinguished from each other so far as the 7 characters considered here are concerned.

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There is considerable admixture with Bihar, the position of Goalas (9th) and Brahmans (8th) being fairly high.

N.W.P. does not show any resemblance. The Punjab castes however occupy high places and indicate either a certain amount of direct contact or else an indirect similarity arising out of the resemblance subsisting between Anglo-Indians and the Bengal Brahmans. A comparison based on characters in which Brahmans differ considerably from the Punjab castes is likely to throw light on this point.

There is practically no resemblance with the aboriginal tribes of Chota Nagpur; in fact they show a greater dissimilarity with the Anglo-Indians ($-85{\cdot}2$) than with the Brahmans ($-73{\cdot}6$). But the eastern tribes show much less dissimilarity, the coefficient for Anglo-Indians being $-25{\cdot}9$ against $-48{\cdot}7$ for Brahmans, $-47{\cdot}3$ for Kayasthas, $-71{\cdot}5$ for Sadgops, $-77{\cdot}0$ for Kaibartas and $-92{\cdot}3$ for Bagdis. Darjeeling Lepchas occupy the 13th place which indicates a certain amount of intermixture with the Anglo-Indians.

We thus find that the Anglo-Indians included in the present sample are derived (on the Indian side) mainly from the Bengal castes. They show a certain amount of admixture with Bihar and also possibly with the Punjab, but not with N.W.P. They are singularly free from contact with the Chota Nagpur tribes, but appear to have intermixed to some extent with the Lepchas of Darjeeling.

So far as the present analysis goes we also see that intermixture between Europeans and Indians in Bengal appears to have occurred more frequently among the higher castes than among the lower. Evidently cultural status played a considerable part in determining Indo-European union. The comparatively high resemblance with Lepchas is also not surprising; their fair colour (as also possibly their freedom from caste restrictions) may have helped intermixture.

General Summary of the Analysis.

If we assume that physical resemblance is the result of actual intermixture, and that also more or less in quantitative proportion,[1] then we may give a coherent interpretation to our results and thus obtain a broad view of the *general tendency* of social history in Bengal.

We find that movements of caste-synthesis are proceeding on every side under our very eyes. Social barriers and caste restrictions have not been able to suppress it completely. The peo-

[1] I would add that physical resemblance may also arise through unauthorised adoption of names of higher castes by person of lower castes (but such surreptitious absorption would in subsequent generations lead to actual intermixture); and also through climatic selection.

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ples from the north-west have fused with the indigenous stock in Bengal and the aboriginal tribes of Chota Nagpur have intermingled with them. Intermixture within the province has gone on slowly and steadily even if imperceptibly and a larger Hindu Samaj has evolved which is not only not identical with the traditional society of Vedic or classic times but is in many respects even antagonistic. Sectarian obstacles have not proved insurmountable; the Mahomedans who came originally as immigrants have contributed their share and have received back their own contribution from the other castes. The process has not stopped here; it has gone on even after the advent of the Westerners with their totally different culture, history and tradition.

Yet equally striking is the fact that intermingling has not been altogether chaotic. It presents a gradual and well-ordered character in which cultural affinity and cultural selection has played an important part. Horizontal fusion (between low and low or between high and high caste) is more pronounced than vertical intermixture, a fact which serves to conserve the stability of the social system. The Hindu community of Bengal does not on one hand conform to the orthodox scheme of a logically perfect system of rigidly exclusive castes between which no intercourse is ever possible; on the other hand neither does it present an amorphous or chaotic character. It shows a definite structure which has its foundation in clearly marked cultural as well as physical differences, but through these differences the process of synthesis is steadily going on under the influence of cultural and geographical proximity.

Conclusion.

I have given above a piece of straightforward statistical analysis; I have also described some of the anthropological conclusions which may be derived from them. Here I wish to make a distinction. The reliability of the statistical results depends only on the accuracy of the measurements used, the validity of the formulæ employed, and the accuracy of the computation. The statistical results may therefore be called positive in the sense that they are amenable to objective checks. The anthropological results on the other hand partake of a definitely historical character, and their significance and weight depends on the legitimacy of the interpretation of historical and sociological factors of varying importance.

Strictly speaking my own business ends with finding the statistical results; and as I do not profess to claim any expert knowledge in anthropology, I must leave the anthropological deductions for consideration and acceptance or rejection by professed anthropologists.

Whatever may be the value of the particular deductions

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given here I believe it would be readily admitted however that a comparison of caste-distances is likely to give us valuable information about caste affinities and connexions, and hence about caste-origins. It would therefore be desirable to make an exhaustive comparison of caste-distances for all castes for which reliable data are available.

The object of the proposed survey will be to arrange all Indian castes (for which reliable data are available) in a systematic way in accordance with their anthropometric measurements. If this systematic classification is once carried out it will be an easy matter to compare and study the connexions between any group of castes with any other.

This programme is not new. It was formulated in 1911 by Dr. (now Sir) Brajendra Nath Seal, in his address on "Race-origins" delivered before the first Universal Races Congress in London. He had stated: [1] "If the groups requiring to be arranged vary in "n" characters, and if biometric measurements are complete, the composite mean of the groups may be taken as the point of origin, and the mean of the single characters for each group may be imagined as marked off on "n" co-ordinates, and the position in n-dimensioned space of each group could be easily assigned." The n-dimensional distance between any two castes in this space will then immediately give their anthropometric distance.

As a preliminary to the proposed survey it will be necessary to collect and examine all available anthropometrical data for India, and after a careful examination accept for final use only those which may be considered reliable and comparable. Neither the proposed survey nor even the preliminary examination of the data can properly be undertaken by a single individual. It is essentially a task for a group of workers. It would therefore be extremely useful to have a standing committee for Anthropology (in connection with the Indian Science Congress) for this purpose.

The first task of this committee will be to prepare a Bibliography of Indian Anthropometry. It will then examine the data and publish an authoritative note on their reliability and their comparability. It should also draw up a standard list of characters with standard definitions for future guidance of field workers in India, and should also indicate areas or castes for which surveys are urgently required. Such a Committee will also prove useful in preventing overlapping of field work and may act as a central clearing house for the co-ordination of anthropometric researches in India.

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[1] *Race Origins*, 1911, *pp.* 7-8.

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APPENDIX I.

I give below short notes on the castes selected for the present analysis.

Bengal.

(1) *Brahmans*, 100. 75 from West Bengal and 25 from East Bengal (24-Perganas 13, Calcutta 12, Nadia 10, Burdwan 9, Dacca 7, Barisal 5, Faridpur 5, Khulna 4, Bankura 4, Jessore 4 and a few other places). The great majority belong to the *Rarhi* group with a sprinkling of *Varendras*.

(2) *Kayasthas*, 100. Traditionally Sudras (the fourth caste) and servants of the Brahmans, now culturally in the same class as the Brahmans. (Jessore 13, Dacca 13, 24-Perganas 8, Faridpore 8, Nadia 8, Hugli 7, Bakarganj 7 and a few other places).

(3) *Sadgops*, 48 (mainly from 24-Perganas 23, Midnapore 7, Hugli 5, Burdwan 4, and Birbhum 4).

Originally cowherds they have now taken to some of the minor professions and trades and enjoy a fairly good social status. Water and sweets are taken from their hands by higher castes.

(4) *Kaibartas*, 100. A cultivating caste, the *chási* or cultivating section of which is *Jal-acharaniya*. 92 belonged to West Bengal. (24-Perganas 22, Midnapore 19, Hugli 17, Nadia 8, Howrah 7, Murshidabad 6, Calcutta 4, and a few other places.)

(5) *Rajbansi*, 100, all from North Bengal (Rangpur 53, Jalpaiguri 24, Dinajpore 18). Believed to be the remnants of an aboriginal race, the Koches of North Bengal, they have become Hinduised and have adopted the Bengali language. According to one view they are a Mongoloid race that entered Bengal from the east by way of the Brahmaputra valley; others consider them to be descended from a Dravidian stock.

(6) *Pod*, 100 (of whom 99 were residents of 24-Perganas). Originally a fishing caste, a large number have now become agriculturists or petty shopkeepers. They are not *Jal-acharaniya* and their touch defiles. They may be served by washermen but as a rule not by barbars. They generally abstain from beef, pork or fowls. Socially they rank very low.

(7) *Bagdis* 100 (of whom 99 came from West Bengal: 24-Perganas 30, Hugli 24, Burdwan 11, Bankura 10, Howrah 5, Birbhum 5, Murshidabad 4). Believed to be of aboriginal descent. Originally fishermen many of them are now agricultural labourers or *palki*-bearers. Some of them eat beef and pork, but there are others e.g., like the sub-caste *Tentuliyas* who abstain from prohibited flesh. Their social rank is very low and although admitted within the pale of Hinduism they are almost on the border-land.

(8) *Mal Pahari*, 100 (of whom 98 belonged to Santal Perganas and 2 to Birbhum). A Hinduised section of the Pahari or hill tribe of Santal Perganas. They speak a form of corrupt Bengali but their Hinduisation is not yet complete, and they are ranked among the lowest of the low.

(9) *Malè*, 100 (98 from Santal Perganas and 2 from Birbhum). An aboriginal tribe allied to the Chota Nagpur group.

(10) *Mahomedans*, 185, all from East Bengal, (Mymensingh 58, Dacca 38, Faridpore 34, Chittagong 27, Tippera 13, Pabna 8, Noakhali 5, and Barisal 2).

(11) *Lepcha*, 57. (Darjeeling 48, Sikkim 8, and Napal 1.) They are the aboriginal inhabitants of the hill districts of Darjeeling and Sikkim; about 250 years ago they were driven out into the lower valleys and gorges by the Tibetans. They are a timid and peaceful people, very fond of their native woods. They have intermarried to some extent with the Limbus and Sikkim Bhotias who both rank higher in the social scale.

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(12) *Magh*, 100. (Rangamati 82, and Chittagong 18.) It is a name which is commonly applied to the native inhabitants of Arakan, particularly those bordering on Bengal or residing near the sea.

(13) *Chakma*, 100 (all from Rangamati and Chittagong). An aboriginal tribe.

Chota Nagpur.

(14) *Bhuiya*, 100 individuals chiefly from Lohardaga 86, Hazaribagh 10, and Santal Pergana 4.

They are believed to be of Dravidian (?) origin and are a respectable class of cultivators, some of whom are small landholders. They are partially Hinduised and have adopted many Hindu rites and customs.

(15) *Kurmi*, 100 individuals from Manbhum 92, Lohardaga 6, and Hazaribagh 2.

They are petty agriculturists with a very humble social position and are not *Jal-acharaniya*. Risley believed them to be a Hinduised branch of the Santals but they may even be of non-aboriginal descent. It appears fairly certain however that they are entirely distinct from the Kurmis (of Bihar and U. P.) whose social position is considerably higher.

(16) *Munda*, 100 individuals from Lohardaga 96, Singbhum 3, and Hazaribagh 1.

They are an aboriginal tribe having universally admitted precedence over other tribes.

(17) *Oraon*, 100 individuals from Lohardaga.

They are believed to have come originally from Southern India.

(18) *Santal*, 100 individuals mainly from Santal Perganas 87, Manbhum 4, Birbhum 3, Midnapore 3, and adjoining districts.

An aboriginal caste who have penetrated more than others into Bengal and are getting partially Hinduised but have not yet been admitted within the pale of Hinduism.

Bihar.

(19) *Brahman*, 100 individuals collected from all over the province (Shahabad 9, Saran, 6, Monghyr 8, Darbhanga 5, Gaya 5, Bhagalpore 4, Champaran 4, Mozaffarpur 4, Allahabad 3, and other places).

(20) *Goala*, 100 individuals from Shahabad 25, Saran 20, Champaran 11, Patna 11, Bhagalpore 8, Gaya 8, Darbhanga 6, Mozaffarpore 5, and a few other districts.

Traditionally cowherds they have now taken to agriculture and occupy a respectable position in Hindu society.

(21) *Dosadh*, 100 individuals from Gaya 36, Monghyr 13, Bhagalpore 11, Darbhanga 8, Patna 8, and other districts.

They are mostly labourers, menials, swineherds, and are despised by Hindus generally and rank a little higher than Chamars.

(22) *Dom*, 100 individuals mainly from Champaran 28, Saran 26, Gaya 22, Patna 12, and a few other districts.

They breed pigs, supply fuel for burning dead bodies, eat prohibited food and occupy a place at the very bottom of the social scale.

North-Western Provinces (United Provinces of Agra and Oudh).

(23) *Brahman*, 100 (Gonda 42, Sultanpore 17, Fyzabad 10, Partabgarh 10, Rae Bareilly 6, and a few other districts).

(24) *Kayastha*, 100 individuals from all over the province. (Lucknow 9, Bareilly 8, Shabajpore 6, Benares 6, Agra 6, Jaunpore 5, Sultanpore 4, Hardoi 4, Aligarh 4, Allahabad 6, and many other districts.)

They are better educated than any other caste in this province and own a considerable amount of landed property. They rank next to the Brahmans in social position.

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(25) *Goalas*, 100 individuals from all over the province (Hardoi 12, Bahraich 11, Fyzabad 10, Lucknow 8, Bareilly 6, Partabgarh 6, Gonda 6, Sitapur 5, and other places).

They are graziers by tradition but have now taken to cultivation. They enjoy a fairly high position in Hindu society but come after the Kayasthas.

(26) *Chamars*, 100 individuals widely distributed in the province. (Fyzabad 13, Bareilly 11, Agra 9, Hardoi 8, Partabgarh 7, Shabajpore 6, Bahraich 5, and other places).

They are leather-workers by tradition but many of them work as agricultural labourers; some of them own small pieces of land. Their social position is very low.

(27) *Dom*, 100 individuals from Gorakhpur 32, Azamgarh 15, Benares 14, Ghazipur 12, and other districts.

They are believed to be of aboriginal descent and in some districts are considered to be a criminal tribe. They come at the very bottom of the social scale almost on the borderland of Hindu society.

Punjab.

(28) *Khetri*, 60 individuals from Lahore 25, Guzrat 6, Amritsar 4, Gujranwala 3, Gurdaspore 3, Multan 3, Peshawar 3, Jullunder 3, and other places. Recognised to be of good social status.

(29) *Pathans*, 80 individuals from Peshawar 48, Bannu 15, Kohat 11, and a few other places.

Although a rather heterogenous collection they probably represent true north-western characteristics.

(30) *Chuhra*, 80 individuals from Lahore 56, Amritsar 6, Sialkot 5, and other places.

They are a class of agricultural labourers, village menials and scavengers and occupy a low position in society.

APPENDIX II.

Out of the measurements given by Risely I have selected 15 (10 absolute measurements and 5 indices) for which I possessed fairly reliable values of variability. The following Table gives the mean standard deviations for 15 characters.

TABLE OF VARIABILITIES.

No.	Character.	S.D.
1	Nasal Index	6·86
2	Naso-malar Index ..	2·92
3	Cephalic Index ..	3·36
4	Fronto-zygomatic Index	2·74
5	Vertico-cephalic Index ..	3·60
6	Stature	5·38
7	Nasal height	2·88
8	Nasal breadth ..	2·51
9	Bimalar breadth ..	4·52
10	Nasomalar breadth ..	6·40
11	Cephalic length ..	6·30
12	Cephalic breadth ..	5·00
13	Frontal breadth ..	3·71
14	Bi-zygomatic breadth ..	4·50
15	Height: vertex-chin ..	10·00

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'In constructing the above table I used from 30 to 40 samples of Indian castes, each consisting of about 100 individuals. Standard deviations were obtained by direct computation in every case and may be considered fairly reliable.

Mean Values. The mean values were directly calculated in every case and where in agreement with (i.e. not differing by more than 0·1 from) mean values given by Risley, the latter were accepted for use. In cases of discrepancy individual measurements were carefully scrutinised and checked through indices, and were suitably corrected, and new mean values were worked out on the basis of such corrected measurements. A list of such reconstructed mean values (differing by 0·2 mm. or more from Risley's values) used in this paper is given below:—

(1) *Bengal.*
Brahman: Fronto-zygomatic index (81·6).
Sadgop: Bizygomatic breadth (127·9).
Rajbansi: Nasal index (76·8). Nasal length (49·1).

(2) *Darjeeling Hills.*
Lepcha: Cephalic Index (80·9). Cephalic breadth (148·7). Nasal length (52·0). Nasal breadth (36·5). Nasal index (70·4).

(3) *Punjab.*
Khatri: Height vertex to chin (217·3).

(4) *Bihar.*
Brahman: Nasal index (73·0).

(5) *Chittagong hills.*
Chakma: Height vertex to chin (219·8).
Magh: Nasal breadth (39·1).

(6) *North-West Provinces.*
Kayastha: Nasal length (44·7).
Dom: Nasal index (83·2). Head length (182·9). Head breadth (136·4).

Mean values for Anglo-Indian.—Stature 165·7 cm.; Head Length 182·3 mm.; Head Breadth 142·6 mm.; Cephalic Index 78·4; Nasal Height 50·1 mm; Nasal Breadth 35·6 mm.; Nasal Index 71·9.

APPENDIX III.

Statistical Definition of Caste-Distance (D).

If M_1 is the mean value of any character (say, nasal index) for one caste and M'_1 the corresponding mean value of the same character for a second caste, then $M_1 - M'_1$ gives the difference between the two castes for nasal index i.e. for the particular character considered. We are however not concerned with single characters; we wish to find the difference between the two castes as a whole, based on a number of characters, that is, we wish to take into consideration not only $M_1 - M'_1$ (say, nasal index) or $M_2 - M'_2$ (say, cephalic index) or $M_3 - M'_3$ (say, nasomalar index) etc. taken singly, but all of them taken together. It is obvious however that a difference of, say, one centimetre in head length is a far more serious matter than the same difference in stature, that is the relative importance of $(M_1 - M'_1)$ or $(M_2 - M'_2)$ is not the same for all characters. It will be therefore necessary to reduce them to some common unit. The standard deviation (s_1, s_2) of the characters concerned may be selected to furnish this unit; so that dividing $(M_1 - M'_1)$ by the corresponding standard deviation s_1 and $(M_2 - M'_2)$ by s_2 etc. we reduce the differences to the same statistical basis. These reduced

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differences can then be compared *inter se* or added together. As some of the differences will be positive and others negative it will be desirable to get rid of the algebraic sign: we therefore take the squares of the reduced differences and adding together for all the different characters we get the expression

$$\left(\frac{M_1-M'_1}{s_1}\right)^2+\left(\frac{M_2-M'_2}{s_2}\right)^2+\ldots\left(\frac{M_p-M'_p}{s_p}\right)^2.$$

Taking the mean value for "p" characters we have

$$D=\frac{1}{p}S\left(\frac{M_1-M'_1}{s_1}\right)^2$$

as a first (provisional) measure of caste-distance.

It should be observed here that $s_1, s_2, s_3\ldots$ should clearly be given the average value of the standard deviations obtained from a large number of different castes. The Table in Appendix II gives provisional values based on my own analysis of from 30 to 40 Indian castes and tribes.

The *Coefficient of Racial Likeness* of Prof. Pearson is defined as

$$C=\frac{1}{p}S\left(\frac{nn'}{n+n'}\right)\cdot\left(\frac{M_1-M'_1}{s_1}\right)^2-1$$
$$=\left(\frac{nn'}{n+n'}\cdot D\right)-1$$

when the number of individual measurements is the same for all characters in the same sample.

When the size of the sample is constant for all samples, the two coefficient D and C are very nearly proportional to each other.

The Probable Error of C (Pearson's C.R.L.) has been calculated in every case from the corrected expression (given by Pearson in Biometrika XVIII, Vol. I and II, p. 104.) $\pm 0{\cdot}6745\sqrt{\frac{2}{p}}$, where p is the total number of characters used for the comparison.

Note added 26th August, 1927.—I may note here that the coefficient D used in the present paper is essentially of the same type as the "Differential Index" proposed by H E. Soper, and used by T. A. Joyce in his "Notes on the Physical Anthropology of Chinese Turkestan and the Pamirs" (*Jour. Roy. Anthropological Inst., XLII, 1912, p. 450*). Soper's coefficient is defined as the sum of (the difference in Means divided by the S.D.), and therefore differs from my D in certain respects. They are both in agreement however about not taking the size of the sample in consideration.

Since writing the present paper I have worked out a coefficient which I believe is theoretically preferable to the one used here. In the present notation it may be written as:

$$D'=\left[\frac{1}{p}S\frac{(M_1-M'_1)^2}{s_1^2}\right]-\frac{n+n'}{n\,.\,n'}$$
$$=[D]-\frac{n+n'}{n\,.\,n'}$$

with variance given by

$$\Sigma^2_{D'}=\frac{4}{p}\left(\frac{n+n'}{n\,.\,n'}\right)[\bar{D}]+\frac{2}{p}\left(\frac{n+n'}{n\,.\,n'}\right)^2$$

where $\bar{D}$ is the mean value of D'. It can be shown that this mean value $\bar{D}=0$ for two random samples taken from the same population.

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It will be noticed that the new coefficient (D') differs from the present one (D) by a small correcting term $(n+n')/nn'$, but is connected with Pearson's C.R.L. [C] by the simple relation :—

$$D' = \left(\frac{n+n'}{n \cdot n'}\right) \cdot [C]$$

Although I consider the new coefficient D' to be preferable to D, I have not altered the figures in this paper for two reasons. The correcting terms are quite small (usually about $-0{\cdot}02$, the maximum value being about $-0{\cdot}03$), so that the conclusions will not be appreciably affected. And secondly, the paper was given as an address on a particular occasion; I have therefore thought it proper to leave the contents practically unchanged.

APPENDIX IV.

Positional Index.

We can compare the relative position of any sub-group, say, the Bengal castes, with the help of a simple positional index described below.

Each of the Tables I, (1)—(7) consists of 29 castes; the average position of a caste is therefore $\frac{1}{2}$ (29+1), that is, 15. Out of these 29 castes, 8 castes belong to Bengal. If all these 8 Bengal castes occupy the first 8 places then the average position of the Bengal castes would be $\frac{1}{2}$ (8+1), i.e. 4·5. On the other hand if the 8 Bengal castes occupy the last 8 places their average position would be 25·5. The total range of variation of average position is thus (25·5—4·5)=21.

Out of this amount (15—4·5)=10·5 is the range above the average position of all castes and (14—25·5)=10·5 is the range below the average position of all castes. Now in actual fact the average position of Bengal castes will be somewhere between 4·5 and 25·5. Let the average position of Bengal castes be "a." Then $(15-a)/10{\cdot}5$ will give a quantitative measure of the relative position of the Bengal castes in the whole list.

The general formula is very simple. Let "n" be the total number in the whole list and "m" the number in any sub-group and "a" the observed average position of the sub-group (obtained by adding together the serial position of each of the castes belonging to the sub-group and dividing by the total number of castes in the sub-group).

The mean position of the whole group is then $\frac{1}{2}$ $(n+1)$. If the m castes in the given sub-group occupy the first m positions in the list, their average position i.e. "a" will be $\frac{1}{2}$ $(m+1)$. If they occupy the last m positions "a" will be $n-\frac{1}{2}$ $(m-1)$. In actual practice "a" will be somewhere between these two limits i.e. the range of variation of "a" will be $(n-m)$. The positional index may then be defined as

$$P = \frac{n+1-2a}{n-m} \times 100.$$

When the "m" castes occupy the first "m" places, the value of "a" will be $(m+1)/2$ and p will become +100, and when they occupy the last "m" places, "a" is $n-(m+1)/2$ and P will be -100.

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APPENDIX V.

In supplementary tables (8·1)—(8·4) I give the average values of C and D and certain indices based on such average values. For example in Table (8·1) for the Bengal Brahmans the average value of D for seven Bengal castes (line 1) is ·500, while the average for all castes (line 7) is 1·246. In Table (8·2) a corresponding index is shown for facility of comparison. If "A" is the general average for all castes, and "a" is the average for any subgroup, then the index used here is defined as $\frac{(A-a)}{A} \times 100$. In the present example, $A = 1{\cdot}246$, $a = {\cdot}500$, and therefore the index

$$= \left(\frac{1{\cdot}246 - {\cdot}500}{1{\cdot}246}\right) \times 100 = +59{\cdot}8.$$

Tables (8·3) and (8·4) give similar figures for C (Pearson's C.R.I.). It will be noticed that the three tables (8·0), (8·2) and (8·4) give very similar results.

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Table 8 (1).—*Average values of D.*

		Brahman.	Kayastha.	Sadgop.	Kaibarta.	Bagdi.	Malpahari.	Mahomedan.	Anglo-Indian.
1	Bengal (7 or 8).. ..	·500	·267	·176	·159	·437	1·473	·537	·264
2	Bihar (4)	·769	·636	·474	·362	·615	1·612	·222	·603
3	North Western Provinces (5)	1·643	1·545	1·167	1·049	1·021	1·637	1·452	1·550
4	Punjab (3)	·619	1·210	1·166	1·093	1·734	3·151	1·109	·452
5	Chota Nagpur (7) ..	2·006	1·541	1·096	·803	·500	·505	1·083	2·281
6	Eastern Districts (3) ..	1·818	1·589	1·408	1·350	1·701	1·738	1·967	1·323
7	General average ..	1·246	1·080	·839	·716	·842	1·521	·990	1·121

Table 8 (2).—*Indices based on average values of D.*

		Brahman.	Kayastha.	Sadgop.	Kaibarta.	Bagdi.	Malpahari.	Mahomedan.	Anglo-Indian.
8	Bengal (7 or 8).. ..	+59·8	+75·2	+79·0	+77·8	+ 48·1	+ 3·1	+45·8	+ 76·4
9	Bihar (4)	+38·3	+41·1	+43·5	+49·4	+ 27·0	− 5·9	+77·6	+ 46·2
10	North Western Provinces (5)	−31·8	−43·1	−39·1	−46·5	− 21·2	− 8·2	−46·6	− 38·2
11	Punjab (3)	+50·3	−12·0	−39·0	−52·6	−105·9	−107·7	−12·0	+ 59·7
12	Chota Nagpur (7) ..	−60·9	−42·7	−30·6	−12·1	+ 40·6	+ 66·7	− 9·4	−103·4
13	Eastern Districts (3) ..	−46·0	−47·1	−67·8	−88·5	−102·0	− 14·2	−99·8	− 18·0

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Table 8 (3).—*Average values of C (Pearson's C.R.L.).*

		Brahman.	Kayastha.	Sadgop.	Kaibarta.	Bagdi.	Malpahari.	Mahomedan.	Anglo-Indian.
1	Bengal (7 or 8)	24·3	12·7	4·8	7·1	20·5	72·5	33·1	17·7
2	Bihar (4)	36·2	29·7	13·9	16·2	29·0	75·1	11·9	37·9
3	North Western Provinces (5)	81·1	76·2	36·8	51·4	50·2	80·8	93·2	102·4
4	Punjab (3)	25·6	50·6	33·0	45·8	73·2	132·3	58·2	23·1
5	Chota Nagpur (7) ..	99·3	75·8	34·5	39·1	24·1	24·2	69·3	151·5
6	Eastern Districts (3) ..	84·8	74·3	42·5	62·6	77·6	75·5	116·7	81·6
7	General average ..	50·2	51·5	25·6	33·5	39·0	70·8	60·5	72·6

Table 8 (4).—*Indices based on average values of C.*

		Brahman.	Kayastha.	Sadgop.	Kaibarta.	Bagdi.	Malpahari.	Mahomedan.	Anglo-Indian.
8	Bengal (7 or 8)	+51·2	+75·9	+81·2	+78·8	+47·4	− 2·4	+45·3	+ 75·6
9	Bihar (4)	+27·8	+42·3	+45·6	+52·4	+25·6	− 6·1	+80·3	+ 47·8
10	North Western Provinces (5)	−61·1	−47·8	−43·7	−54·1	−28·7	−11·3	−54·0	− 41·1
11	Punjab (3)	+49·0	+ 1·7	−28·8	−36·7	−87·7	−86·8	+ 3·8	+ 68·2
12	Chutia Nagpur (7) ..	−97·8	−47·2	−34·7	−16·6	+38·2	+65·8	−14·5	−108·6
13	Eastern Districts (3) ..	−68·9	−44·3	−66·0	−86·8	−98·9	− 6·6	−92·8	− 12·4

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A Preliminary Report on Injection Experiments with special reference to the Production of Alkaloids and general Metabolism in Plants.

By S. KRISHNA *and* H. CHAUDHURI.

INTRODUCTION.

It is a well-known fact that in very closely related plants, differences exist regarding the production of alkaloids; for example in the Opium Poppy (*Papaver Somniferum*) a considerable quantity of morphine and berberine is present, whereas in the Red Poppy (*Papaver Rhaeas*) practically no alkaloid is produced. Similar differences exist in the production of scent and colour, as in *Lathyrus odoratus* and *Lathyrus aphaca* and in different species of *Delphinium*, etc.

As far as the authors are aware, with the exception of some work on colour production in certain flowers, no systematic attempt has hitherto been made to explain these differences. The present note deals with an attempt to find out the causes that produce such differences and to test whether such differences are due to the metallic elements that are present in plants or to some physiological nature connected with the protoplasm. The role of metals is suspected to be catalytic in nature, and since different metallic catalysts, starting from the same elements, will synthesise different organic substances (for example, essential oil, colouring matter, alkaloid, etc.), it is probable that the introduction of a suitable metal or non-metal either in seeds or in plants will produce such differences as have been given above. With this idea in view, these experiments were conducted during last winter and spring in Lahore. This work is far from complete or conclusive, but as some interesting results were obtained, this preliminary note is published with a view to bringing these to the notice of other workers in this line.

Experimental plants.—Seeds of the following plants were obtained and cultivated in pots under control.

Plants with difference in alkaloid :—

Papaver somniferum,
Papaver Rhaeas, and
Argemone mexicana.

Plants with difference in colour of the petals:—

Delphinium (white, rose and blue),
Mathiola (red and white),

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Linum (blue and red),
Hyoscymus (black and white).

Method and procedure.—The seeds of the plants were analysed qualitatively for even the minutest traces of metals and certain non-metals present. Three grams of dried seeds were taken and ignited carefully and the residue was then analysed qualitatively for acid and basic radicals. The depth of colour obtained for various radicals indicated whether traces or greater quantities of it were present. The quantitative work has been left for future communication. The following table shows the results thus obtained :—

	Fe	Al.	K	P	S	Mg.
Delphinium, blue	.. races	traces	nil	traces	much	traces.
do white	.. do	nil	nil	much	much	much.
do rose	.. do	traces	nil	much	much	much.
Hyoscymus black	.. traces	nil	traces	much	much	traces.
do white	.. traces	nil	nil	much	traces	traces.
Linum blue	.. traces	traces	nil	much	much	traces.
do red	.. traces	traces	nil	much	traces	traces.
Argemone mexicana	.. much	little.				
Papaver somniferum	.. little	much.				
Papaver Rhœas	.. V. little	much.				

In the first set of experiments the seeds of the plants were treated with different salt solutions (Ferric chloride, ferric nitrate, ferrous and ferric sulphates, aluminium chloride, aluminium nitrate, potassium chloride, sulphate and nitrate, magnesium sulphate, chloride and nitrate). A twofold difficulty was encountered. In many cases the salts were absorbed by the seed coats only, for when the coats were removed no traces of the absorbed solutions were to be found. Again when the seeds were made to absorb the solutions by removing the seed coats or by steeping the seeds in the salt solutions for three or more days, they lost their power of germination. To get over these difficulties injection experiments were carried out. The untreated seeds were germinated and after the plants had grown into seedlings of 4 to 6 inches in height, they were injected by means of hypodermic syringes with colloidal solutions of different metals and certain non-metals which our analyses had shown to be lacking or less abundant. Thus, for example, in *Hyoscymus* white only a very small quantity of Sulphur was present, while in *Hyoscymus* black sulphur was abundant. So *Hyoscymus* white was injected with colloidal sulphur. The following table shows the list of injections carried out in different plants:—

With colloidal iron:

Papaver somniferum, *Papaver Rhaeas*,
Mathiola red and white.

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With colloidal aluminium :

Hyoscymus black, *Delphinium* rose,
Mathiola red and white.

With colloidal sulphur :

Hyoscymus white, *Linum* red,
Mathiola red and white,
Papaver somniferum, and
Papaver Rhaeas.

The experiments with colloidal Potassium and Magnesium were not proceeded with.

The stems of the plants were injected near the soil level, and about ½ to 1 cc. of the colloidal solution was pressed in very gently and slowly. The following strengths were used :—

Colloidal iron	.. ..	0·003%
Colloidal aluminium	..	0·001%
Colloidal sulphur	.. ..	0·2%

The injury due to the needle was covered up by painting with a little of collodion solution. The plants were examined daily regarding their growth, flowering, seed, production, etc. In many cases the injections greatly interfered with the flowering and seed-production, and in this respect the effects of iron and aluminium were the most marked. Though in many cases the effects of injection were distinctly beneficial as regards growth, the development of the flower bud was very much delayed and in some cases suppressed altogether; thus although *Mathiola* white, when injected with colloidal iron, produced a number of flower buds, yet these failed to open. When one of the control plants, in which some buds had already opened, was injected with colloidal iron it stopped opening the buds.

Decided beneficial effects, viz. vigorous plant growth and more flowers, were obtained in almost all cases when colloidal sulphur was injected, though the flower buds developed a little late. In all the above cases the colloidal solutions were made in conductivity water, and the control plants were left untreated. Detailed analyses were carried out of the injected plants of Opium Poppy and Red Poppy regarding the changes, if any, produced with reference to alkaloids. The plants (*in toto*) were extracted with solvents (alcohol, water and acetic acid) for the alkaloid and the solutions were tested qualitatively. No quantitative work could be undertaken with such small quantities as were at our disposal. The following results, though not conclusive, are nevertheless interesting :—

Opium Poppy—untreated—a small quantity of berberine found.

Opium Poppy—injected with colloidal iron—traces suspected.

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Red Poppy—untreated—suspicion of morphine and berberine.

Red Poppy—injected with colloidal iron—traces of berberine found.

It will be seen that injection of colloidal iron appears to reduce the berberine in the Opium Poppy, whereas it increases the berberine or rather produces it in the Red Poppy, in which, under normal conditions, practically no berberine is found. This result is far from conclusive but it gives ground to the suspicion that iron in this case acts as a catalyst and we may be able to make the plants produce altogether different organic matters by the simple injection of very small quantities of suitable elements.

It is a pity that *Argemone mexicana* did not flourish sufficiently well in the green house as to give satisfactory results, but the authors hope to carry out the experiments under field conditions and to repeat in the future all the above experiments more fully.

University Chemical Laboratories,
Lahore.

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Lunar Periodicity in the Reproduction of Insects.

By Sunder Lal Hora.

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In recent years[1] considerable attention has been paid to the study of lunar rhythms in the reproduction of certain animals, chiefly marine organisms; but so far as I am aware no observations have hitherto been recorded on the occurrence of such a periodicity in the appearance of the swarms of insects. It is a well known fact that for the sole purpose of reproduction swarms of certain insects, *e.g.*, mayflies, appear for a very limited period at definite seasons. In May-June, 1926, while collecting mayflies at the request of my colleague Dr. B. N. Chopra in the Kangra Valley (Punjab, India), I was greatly impressed by the fact that mayfly swarms (about a dozen or more genera were collected between the 23rd and 31st of May) appeared about the full moon period (full moon date 27th May, 1926), and though on other nights I was generally out in the stream-bed with a lantern no mayflies were collected. After six weeks' observations I was led to believe that moonlight exerts some kind of influence on the emergence of these insects and it is obvious that light would be a great help to the flies in their nuptial dances and in egg-laying. On my return to Calcutta, dates of swarming of several species were collected from different sources, but these data did not help me much. To elicit further information a short note was read before the 14th meeting of the Indian Science Congress in January, 1927, an abstract of which has appeared in the *Proceedings* (p. 199).

To show that a lunar rhythm exists in the reproduction of mayflies, it was necessary to get data regarding the swarms of the same species on more than one occasion, and with this object the dates of the published records were collected and Professor R. A. Sampson, F.R.S., has been kind enough to compute the dates of the nearest full moon in the case of older records.

Müller (*Ent. Mo. Mag.* I, p. 262, 1865) observed the swarms of *Oligoneuria rhenana* Imhoff and remarked that, "The imagos appear at Basle in the first days of September, in

[1] Fox, H. M.—*Proc. Roy. Soc.*, B., XCV, p. 523 (1923); Fage and Legendre, *Archiv. Zool. Exper.* LXVII, p. 23 (1927). (See bibliography.)

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immense numbers," but in the next year (*ibid.*, II, p. 182) he recorded the swarms of these insects as early as the 25th and 26th of July. In 1865, there was full moon on the 5th of September and in 1866, on July 27th. McLachlan found the same species in swarms (*ibid.*, XVII, p. 163) at Basle on the 25th of August 1880. The date of full moon was August 21st. From the above observations it seems probable that *O. rhenana* swarms about the full moon period.

Reaumur observed swarms of *Polymitarcys virgo* from 18th to 22nd of August, 1738 and in smaller numbers on succeeding days (Miall, *Aquatic Insects*, pp. 309–314, 1903). The date of nearest full moon was 19th of August. In 1883 Desmarest (*Bull. Soc. Ent. France* (6) III, p. cvii, 1883) found the same species in swarms from the 23rd to 25th of August. There was full moon on the 17th of August. *P. virgo* is thus found to swarm between the last quarter and full moon.

Mrs. E. S. Maxwell sent to the Indian Museum specimens of *Palingenia robusta* Eaton from swarms taken on 26th of October 1916 (full moon date 11th October), on October 30th 1918 (full moon date 19th October) and on 25th October 1919 (full moon date 7th November). These records indicate that *P. robusta* swarms between the last quarter and the new moon.

Needham (*Bull. U. S. Bur. Fish, Washington*, XXXVI, pp. 269–292, 1917-18) has recorded a series of observations on the appearance of *Hexagenia bilineata* in 1916 and remarked that " emergence was in waves ; that successive waves reached their height at about the 13th, 18th, and 23rd of the month, with falling away in numbers on intervening dates; that subsequent smaller waves culminated on the 10th and the 23rd of August, separated by intervals of entire absence of adults; and that belated reappearance occurred on the 2nd and 15th of September." Except for the 18th of July, the other dates show a more or less periodic arrangement. The swarms that appeared on the 13th July (F. M. 15th July), 10th of August (F. M. 13th August) and the 2nd of September (F. M. 10th September) were out between the 1st quarter and the full moon; while those that appeared on the 23rd of July, 23rd of August and 15th of September came out chiefly between the last quarter and the new moon. The appearance of the belated swarms in September is rather irregular. I had associated the emergence of each species of mayfly with a certain intensity of light so Needham's records were rather surprising to me. I find, however, that Needham has combined in his *H. bilineata* two species recognised as distinct by Walsh (*Proc. Ent. Soc. Philadelphia* II, p. 199, 1863) on the colouration of their eyes etc. Walsh also observed that in a large swarm only individuals of one type were found. This suggests that either Needham was dealing with two species or *H. bilineata* is dimorphic so far as the colour of the eye is concerned. On this last factor

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probably depends the emergence of the two forms at different states of the moon.

While investigating the headwaters of the Nerbadda River (C.P.) I collected mayflies from swarms from 13th to 16th February, 1927 (F. M. 16th February). Needham (*Canadian Ent.* LIX, p. 13, 1927) observed swarms of *Rhithrogena mimus* from 24th to 28th of June (F. M. 25th June). Collison recorded swarms of mayfly (*Phil. Trans. Roy. Soc.* No. 481, p. 329, 1746) at Winchester from 27th to 30th May, 1744. There was full moon on the 28th of May, 1744. These observations indicate that the mayflies that live in the clear and shallow waters of hill-streams emerge on bright moon-lit nights.

At Dalhousie (W. Himalayas) I noticed. while collecting insects every day with a strong light, that a large Tipulid fly came to light for three or four days only about the period of full moon on two occasions.

In the Central Provinces and at Dalhousie I observed swarms of Trichoptera only on dark nights. The compound eyes of these caddis-flies are usually small and the males of certain species possess scent-brushes. These are probably adaptations for finding mates in the dark.

Further observations on insect swarms in relation to the state of the moon are very desirable.

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On *Pericrocotus speciosus speciosus* (Lath.) occurring in Ranchi District, Chota Nagpur.

By Satya Churn Law.

During my tour in October-November last in the district of Ranchi, I was able to collect half a dozen specimens of *Pericrocotus s. speciosus* (Lath.), which are now in the Indian Museum. I found these not only occurring in small flocks or in pairs in forests or forest-fringes but also on roadside trees somewhat away from them. The following are the places where the specimens were shot by me:

Place.	*Date.*
Off Ichadag Hill on Ranchi-Hazaribagh Road ..	9th November, 1927.
Near Rajadera on Ranchi-Purulia Road ..	29th October, 1927.
Do. ..	14th October, 1927.
Fringe of Jonah forests on Ranchi-Purulia Road ..	26th October, 1927.

On a reference to Mr. Stuart Baker's Avifauna of British India I notice that Chota Nagpur (within which the District of Ranchi is situated) has been omitted from the range of distribution of this species. Mr. Stuart Baker writes as follows:—

Distribution:—The Himalayas from the Sutlej Valley to Eastern Assam, North of the Brahmaputra; The Khasia Hills; across the Northern Kachin Hills into Yunnan.

But I find Oates (First Edition, Fauna, British India, Birds, vol. I, page 480) rightly including Chota Nagpur within the range of distribution of this bird. There is one other species of *Pericrocotus* whose distribution Mr. Stuart Baker records as being in Northern India, extending from the foot-hills of the Himalayas as far south as the Central Provinces and Lower Bengal in winter. This bird is called *Pericrocotus b. brevirostris* (Vigors). Its colouration is so much akin to that of *Pericrocotus speciosus speciosus* (Lath.) as might give rise to some confusion as to the correct identification of the two birds. But on scrutiny I find the characters distinguishing each other are sufficiently well-marked so as to leave no room for any mistake in identification. These characters are:—

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Innermost secondaries with oval red drops	*P. speciosus* ♂
Innermost secondaries with no oval red drops	*P. brevirostris* ♂
Innermost secondaries with oval yellow spots	*P. speciosus* ♀
Innermost secondaries with no oval yellow spots	*P. brevirostris* ♀

Besides *Pericrocotus s. speciosus* is larger in size than *Pericrocotus b. brevirostris*: Total length of the former is about 230 mm. and that of the latter only about 180 mm. Maximum measurement of the wing of the former is 106 mm. and that of the latter only 96 mm.

On examination of my specimens I find total length averages 208 mm. and maximum wing measurement is 105 mm. Innermost secondaries in ♂ are with scarlet oval drops near the extremity of the outer webs and in ♀ they are with oval yellow spots on the outer webs. These characters unmistakably establish the identity of my specimens as being *Pericrocotus s. speciosus* (Lath.).

In Mr. Stuart Baker's description of this species (Fauna British India, second edition, vol. II, page 319) I notice some omissions, and one which I consider not trifling I take this opportunity to point out. In adult males he describes the greater wing-coverts as scarlet, but I find they are black at the base, a feature which was rightly recorded by Oates in the old edition, Fauna British India (Birds), page 480 In my specimens I observe that the central tail-feathers in ♂ at this time of the year are invariably with scarlet on the outer webs and with a similar streak at the tip.

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A Further Note on the Manuscript Drawings of Fish in the Mackenzie Collection.

By SUNDER LAL HORA.

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Last year attention was directed (*Journ. Asiat. Soc. Bengal.* N.S., XXII, pp. 93–98) to the fish drawings in that part of the Mackenzie Collection which is now lodged in the library of the Asiatic Society of Bengal. It was pointed out at the same time that there were certain other munuscript volumes in this collection which contained illustrations of Natural History objects. While on a visit to London advantage was taken of an opportunity to examine these in the India Office Library and the following account is based on the results of this examination.

The India Office Library possesses two volumes belonging to the Mackenzie Collection which contain Natural History drawings. One of these corresponds with and is designated as "No. 4 on p. ccxxiii of the catalogue of the collection by H. H. Wilson, (p. 581 of Ed. 2, Madras, 1882)." The contents of this volume as stated on the first page of the volume have already been given (*l.c.*, p. 94 footnote), but I wish to make it clear that a "drawing" really means a plate, each of which contains several illustrations. Thus there are seven plates of fishes, containing 24 illustrations representing 21 species. The species represented are the same as those listed already (*l.c.*, pp. 96-97) with the exception of *Kanduka*. There is a slight difference in the numbering of these drawings as compared with those in the library of the Society. For example Nos. 3 and 20 of the India Office Library are Nos. 4 and 21 respectively of the Society's Library, and *vice versa*. It may here be remarked that the date and place of collection of the fish illustrated in drawing No. 21 of the Society's collection are the same as those of the drawing No. 20.

The second volume contains "Natural History and Botanical Drawings." There are 74 plates in this volume which are distributed as follows :—

Mammals	..	..	10
Birds	..	..	16
Fish	..	..	14
Crustacea (prawn)	..	..	1

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Spider	..	..	1
Insects	..	..	3
(Several forms)		..	1
Reptiles	..	..	18
Mermaid	..	..	1
Plants	..	..	9

Of the 14 plates of fish 8 are devoted to a *pallachee* fish of Mavillapooram a specimen of which is said to have been found among rocks on the shore in December, 1816. The description of it is given as follows: "The skin of the lower part of Pallachee is tough and covered with small prickles like shagreen of a light brown colour, the teeth project forwards, the jaw bones are seen distinctly and the skin a little inclined to sink; *the skin about the anus is black* and only about an inch from the tail which is small and stiff like that of other fishes—the ears are similar to a man's of that size; and the sides from whence the belly projects out is of the same tinge as the back." (The italics are mine.) A specimen 1 foot $7\frac{1}{4}$ inches was collected at Mavillapooram. I think *pallachee* is *Tetraodon stellatus*, for in this species the anus is surrounded by a very distinct black ring.[1] *Diodon hystrix* is called "*Moollu plachay*" in Tamil (Day, *Fish. India*; p. 708), but the figure leaves no doubt that *Pallachee* is a *Tetraodon*.

Another species of *Tetraodon* occupies two plates in this collection. One plate contains the lateral and the dorsal views of an *Echeneis*, probably *E. neucartes*. Two plates are devoted to *Pterois russellii* and the last plate to a Trygonid ray, probably *Trygon kuhlii*.

It may be of interest to record that with the illustrations of mermaids there is a spirited article in the volume showing that such animals do exist.

Zoological Department,
University of Edinburgh,
April, 1928.

[1] Note by Editor. On the other hand the species figured may be *Tetraodon hispidus* and the account of the distribution of the "small prickles" and the reference to the "Ears" agrees better with the characters of this species than with those of *T. stellatus*.—R.B.S.S.

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Aśvaghoṣa and the Rāmāyaṇa.

By C. W. Gurner.

The Sanscrit poems of the Buddhist scholar and poet Aśvaghoṣa have usually been studied in their bearing on Kālidāsa rather than in relation to the earlier epics. The Polish scholar Andrzej Gawronski has drawn attention to this latter aspect in notes on the Buddhacharita and the Saundarananda, and has made a brief intensive study of the influence of the Ayodhyākāṇḍa of the Rāmāyaṇa on the Buddhacharita. He points out the similarity in the narratives of the departure of Rāma to the forest with the subsequent return of Laksmana alone to the desolate city, and of the departure of Siddhārtha with the return to the city of Chaṇḍaka the charioteer. The parallelism is emphasised by direct references in the Buddhacharita, especially in Sarga VIII, to the story of the Rāmāyaṇa, four of which relate to the Ayodhyākāṇḍa. Finally a number of verbal reminiscences leave little doubt that Aśvaghoṣa was acquainted with the standard text of the Ayodhyākāṇḍa as we have it to-day.

It is the object of the present article to suggest on a rather broader scale the general range of comparison between the Buddhist Kāvyas and the early epics, with special reference to the Rāmāyaṇa. If we accept the postulate that Aśvaghoṣa's date lies between the earlier epic and Kālidāsa, the comparison marks a stage in the development of Sanscrit classical literature. If the date of the author of the two Kāvyas is regarded as still open to question, it has a good deal of bearing on the answer. One can attempt no more than the barest sketch with some of the details filled in.

The trend of both poems with their motif of renunciation naturally brings them more closely into contact with the Rāmāyaṇa. With the direct references to that epic Gawronski has dealt in detail. There is one however, not particularly

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The following are the editions quoted in this article.
Rāmāyaṇa. Nirnayasagara. Bombay. Sak 1830.
Buddhacharita. Oxford. Cowell. 1893.
Saundarananda. Bib.Ind. Mahamahopadhyaya Haraprasad Sastri, C.I.E., 1910.

Gawronski's notes are in two pamphlets, "Studies about the Sanscrit Buddhist Literature" (1919) and "Notes on the Saundarananda" (1922) Memoires de la Commission Orientale de L'Academie Polonaise (Nos. 2 and 6). I owe my acquaintance with these to the kindness of Professor G. Tucci, D.Ph.

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discussed by him, which certainly seems to imply that Aśvaghoṣa was thinking at the moment of some other version of the close of the story than that of the standard epic.

तथा महीं विप्रकृतामनार्यैः ।
तपोवनादेत्य ररक्ष रामः ॥

B. IX. 59.

Where does this element of misrule, the "corruption by the unworthy" come from. The tone of the epic version is different. There is the strain of overwork

धुरमेकाकिना न्यस्तां वृषभेन बलीयसा ।
क्षिप्रोरुवद् गुरुं भारं न वोढुमहमुत्सहे ॥

R. VI. cxxviii. 3

but never collapse before the forces of evil. It is possible that the reference here is not to the Rāmāyaṇa at all, but to some form of a Daśaratha Jātaka.

Two references to Vālmīki are of importance. The words

वाल्मीकिरादौ च ससर्ज पद्यम् ।

B. I. 48

may or may not be a direct allusion to the well-known incident in the Rāmāyaṇa

मा निषाद etc.,

R. II. xv.

The curious word वाल्मीकिनादद्य in Cowell's text, if correct, would leave no doubt about the intention, but there seems better authority for वाल्मीकिरादौ (*Vide* E. H. Johnston ad loc : J.R.A.S., Ap., 1927, p. 214.) The allusion to Vālmīki as tutor of the two sons, in S. I. 26 points unmistakably to the Uttarakāṇḍa. At the same time of course neither reference would carry any implication as to Aśvaghoṣa's acquaintance with the mass of legendary accretion in the Bālakaṇḍa and the Uttarakāṇḍa as they now stand, traces of evidence for which will be mentioned later.

So much for direct references to the Rāmāyaṇa. Before going into the general range of comparison I would touch at this point also on some of the most obvious references to the Mahābhārata, with the object of putting the subsequent notes into their proper perspective. It is cited, like the Rāmāyaṇa, in moral instances,
e.g.

विनाग्निमीयुः कुरवो यदर्थं ।

B. XI. 31

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and

क्व कार्त्तवीर्य्यस्य बलाभिमानिनः ।

सहस्रबाहोर्बलमर्ज्जुनस्य तत् ॥

S. IX. 17

or recalled quite casually by verbal assonance

स पांडवं पांडववीर्य्यतुल्यः ।

In both the Kāvyas the legend of Mādrī and Pāṇḍu points the moral of addiction to women

स्त्रीसंसर्गं विनाशांतं पांडुर्ज्ञात्वापि कौरवः ।

मात्रीरूपगुणाच्छिन्नः । etc.

B. IV. 79. Cp. S. VII, 45.

In the allusion to Gautama Dīrghatapas, also occurring in both poems,[1] Gawronski finds the influence of the Sabhāparvan of the Mahābhārata, Adhyāya xxi, and moreover shows good reason for believing that the same Adhyāya provided the model for the description of the city of Rajagṛha in the Buddhacharita. (B. X.)

I now turn almost exclusively to aspects of comparison with the Rāmāyaṇa. Its influence on Aśvaghoṣa extends to four fields. These are (*a*) Stock topics. (*b*) Style and Alankara. (*c*) Grammar and Vocabulary. (*d*) Moral instances. I follow this classification.

I

Stock Topics.

The poem of Aśvaghoṣa mark a stage in the development of Kāvya from a more or less narrative poem to a series of set pieces on conventionalised topics. This tendency may be observed even with the Rāmāyaṇa itself; and it is not exaggeration to say that, with the exception of technical passages of Buddhist doctrine, the whole range of topics made use of by Aśvaghoṣa, whether in the main current of his narrative or incidentally, is comprehended in the Rāmāyaṇa.

These topics are of two kinds, either descriptive passages of purely literary value, or fragments from the general corpus of standardised Sanscrit learning. Without attempting to define the branches of knowledge from which these fragments are drawn in the categories familiar to the writers themselves, it is enough to say that they come from the schools of philosophy, political and military science, ethics and

[1] Gawr: S. S. B. L. pp. 27–39.

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psychology, grammatical and aesthetic theory, and practical handbooks on animals, arms, and other interests of a gentleman's life. The duties of a king, the technique of an army, the qualities of good cultured speech, the duty of telling unpleasant truths, the moral conflict over the renunciation of vows, the pain of separation and consolement in the transitoriness of the world, are commonplaces alike of the Rāmāyaṇa and Aśvaghoṣa. It is significant that they share these commonplaces as a whole, but with material of this kind it does not of course follow in the least that any precise allusion in one poem is derived from another. They are taken no doubt by both writers direct from the general stock of learning, and it is simply the habit of interspersing these allusions, and dwelling now and then to moralise on the narrative that represents the epic influence.

The descriptive or literary passages are of more direct bearing on the comparison ; and, if I mention generally a few of these parallels to be found between Aśavaghoṣa and the Rāmāyaṇa it is with the knowledge that any other reader of both will find material to increase the list. The model reigns of Daśaratha and Rāma with the illogical, but persistent, combination of material prosperity, general good-will and climatic blessings are echoed in the conditions of Kapilavastu during the reign of Suddhōdhana and after the return of the Buddha. (R. I. vi. R. VI. cxxviii. 18 ff. B. II. 1–16. S. III. 30–41.) Notice too how the allusion to Manu in R. I. vi. 4

यथा मनुर्महातेजा लोकस्य परिरक्षिता ।

R. I. vi. 4

is repeated in both passages of Aśvaghoṣa. The stock description of a city in R. I. v. must have been among the models for that in S. I. 42–55. The descriptions of the Asram in B. VII. 32 and S. I. 5–17 recall those in R. III. i. 1–9. R. III. xi. 47–52. (Cp. R. II. xcix. 12.) The types of asceticism detailed in B. VII. 14–18, look very like an elaboration of the bare list of technical term for ascetics in R. III. vi. 2–5, the

अश्मकुट्टाः and the दन्तोलूखिनः

reappearing in the line

अश्मप्रयत्नार्जितवृत्तयोऽन्ये ।

केचित्स्वदन्तापहृतान्नभक्षाः ॥

B. VII. 16

and on the same topic R. XII. xcii. 91–93 and R. V. xiii. 38 ff. may be taken more generally into comparison. Gawronski has quoted close verbal parallels between Yasodhara's lament in R. II. xii, with R. II. lviii, and the parallel passage in B. VIII.

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It may be added that the Rāmāyaṇa is rich in these feminine laments, *e.g.*, Tārā's in R. IV. xx and R. IV. xxiii, and Sītā's again in R. V. xxv, xxvi, xxviii. The mere practice of piling them up, due sometimes possibly to accretion, is worth comparison with the trio of laments in B. VIII; and one catches echoes from them not only in this passage but also in Sundari's lament over her desertion by her husband. S. VI. 13–24. The occasional feminine sarcasm with which the pathos is heightened (B. VIII. 34. 64; S. VI. 17) has a flavour of Sītā's tongue "परुषं वाक्यम्" (*e.g.* R. III. xlv. 21–27.). Sundarī, it may be added, follows the woman's way with her ornaments, just as Kaikeyi had been taught to do at a *crise de nerfs*

सुवर्णेन न मे ह्यर्थो न रत्नैः ।

R. II. ix. 59

Cp.

न भूषणेनार्थो मम संप्रतीति ।

सा दिक्षु चिक्षेप विभूषणानि ॥

S. VI. 28.

Occurring in such passages of the Rāmāyaṇa, but not confined to them is the motif which reappears in well known passages of Kālidāsa, that of the contrast in human fortune between royal enjoyment and ascetic endurance, between delicate nurture and harsh exposure; and this too Aśvaghoṣa appears to have taken over from the Rāmāyaṇa with his usual elaboration of the descriptive element. The simple pathos of

भूमिपालात्मजो भूमौ शेते ।

R. II. lviii. 6

develops into

प्रचेरितास्ते भुवि तस्य मूर्धजाः ।

B. VIII. 52

with a string of epithets to emphasise the contrast. (Cp. R. II. xcix. 31 ff. R. II. xxiv. 3. etc. B. VI. 28.) The weeping horse of Siddhārtha is a quite definite verbal reminiscence of a striking little coincidence between Vālmiki and Homer.

वाष्पमुष्णं मुमोच च ।

B. VI. 53

Cp.

उष्णमश्रु विमुञ्चन्तौ ॥

R. II. lix. 1.

The animal-faced demons of Māra, armed with trees and stones, recall on the one hand the hosts of Rāvaṇa and on the other the weapons of the apes. The long descriptive passage

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वराहमीनाश्वखरोष्ट्रवक्त्राः । etc.,

B. XIII. 19

suggests the usual verbal reminiscence of a simpler origin

यश्चैव नानाविधघोररूपैः ।

व्याघ्रोष्ट्रनागेन्द्रमृगाश्ववक्त्रैः ॥

R. VI. lix. 23.

In the same Sarga too Aśvaghoṣa shows that curious interest in describing a loud noise, such as the shout of an army, which runs from the Rāmāyaṇa through the classics (e.g., R. VI. xlii. 38 etc. B. XIII. 52 ff).

In the Buddhist writings one gathers that there is an appreciation of nature which is different in spirit from that of Sanscrit thought; but in his poem Aśvaghoṣa remains bound by the traditions of the medium in which he is composing. The mountain scenery and heavenly gardens into which the Buddha leads Nanda (S. X. 4–14 and 18–31) recall passages in the epic which set the style in the painting of nature, and supernature, for the later Kāvyas, *e.g.*, the mountains in R. V. lvi. 26-50 and the gardens in R. VII. lxii. 1–16. (Though it remains to be discovered from what source Aśvaghoṣa took his extraordinary birds.)

The interpretation of nature in the terms of human passions is, again, a special theme which dominates classical Sanscrit literature, from Kālidasa to Jayadēva. It occurs in certain passages in the Rāmāyaṇa, the most remarkable being the "Seasons" in R. IV. xxviii, and R. IV. xxx; and before one could make much progress with this subject one would have to form some idea as to how far this theme can be held to occur in the original stratum of the epic. That in itself would be an extensive enquiry, but in the aggregate there can be little doubt that such passages do occur, if not in Vālmīki's original, at any rate in an earlier stratum of literature than the Buddhist writers in Sanscrit. It is to this interpretation of nature in the terms of passion that Aśvaghoṣa has recourse, for instance, in accentuating the restlessness of Nanda on his first following the Buddha

अशोकमालम्ब्य स जातशोकः ।

प्रियां प्रियाशोकवनां सुशोच ॥

S. III. 5.

There was a good deal of past history about the Śṛngārarasa before it could find expression in so artificial a line as that.

A good instance of the influence of different strata of the Rāmāyaṇa on Aśvaghoṣa will be found in the parallel,

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pointed out by Cowell, between the women asleep in the palace of Suddhodhana and those in the palace of Rāvaṇa. B. V. 47–63 and R. V. x. 30–49. Cowell's citation is only one of three passages with the same theme in the Rāmāyaṇa the other two being R. V. ix. 33–36 and R. V. xi. 29–36. There can be little doubt, I think, firstly that the passage in the ninth Serga of the Sundarakanda is itself an elaboration of that in the tenth, and secondly that both were in existence in the Rāmāyaṇa as known to Aśvaghoṣa. He takes off in his description at the same point as the tenth Sarga

अभवच्छ्रयिता हि तत्र काचिद्.....

अंकगतां विहाय वीणाम् ।

B. V. 48

Cp.

काचिद्वीणां परिष्वज्य सुप्ता ॥

R. V. x. 37

and runs through much the same catalogue of musical instruments with the same sensual implications. The imagery and compound structure of the passage is, however more reminiscent of the ninth Sarga, from which one simile appears to be taken direct

गजभग्ना इव कर्णिकारशाखाः ।

Cp. B. V. 51

गजेन्द्रमृदिताः फुल्ला लता इव ॥

R. V. ix. 47.

Moreover the phrase

उपगुह्य परस्परं विरेजुः ।

B. V. 54

and the slight Saphoism

वनितालिंग्य सखीमिव प्रसुप्ता ॥

B. V. 55

are reminiscent of the tangle of womanhood described in one of the most vivid passages of the epic,

ऊरुपार्श्वकटीपृष्ठमन्योन्य यस्य समाश्रिताः ।

R. V. ix. 61.

The shortest passage of the three, R. V. xi. 29–36, whether an earlier stratum again than that in the tenth Sarga, or a contemporary repetition, is absorbed by the other two; and, beyond setting the key,

पद्मनीनां प्रसुप्तानां रूपमासीद्यथैव हि ।

R. V. xi. 36

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is of no immediate reference to Aśvaghoṣa's poetry. The essential point of the whole comparison is that here there are at least two strata of distinctly Kāvya writing in the Rāmāyaṇa, and that Aśvaghoṣa shows signs of influence by the later as well as by the earlier.

One of the small incidental topics which can be traced from the Rāmāyaṇa through Aśvaghoṣa to Kālidāsa is the festival of Indra's banner. The allusion is worth attention in detail through its suggestive bearing on the relation of the early epic and of Aśvaghoṣa to the drama. The very frequency with which it occurs in both the epic and in Aśvaghoṣa is significant. (See R. II. lxxiv. 36. R. IV. xvi. 37 and 39. R. IV. xvii. 2. R. IV. xxxiv. 3. R. V. ii. 59. R. VI. xxii. 54. R. VII. xxi. 44. and in Aśvaghoṣa B. I. 63. B. III. 12. B. VIII. 73. S. III. 25. S. IV. 46.) Cowell suggests that it connects Aśvaghoṣa with Western India but it is obvious that this imitative allusion in Aśvaghoṣa may well be devoid of any local significance. The topic is mentioned in the same way by both writers to illustrate two points of feeling, the sense of dejection and collapse at the end of the festival symbolised in the fall of the banner, and the general elation when the banner is raised. In one case at least the allusion is in direct imitation of its use in the Rāmāyaṇa.[1] The father of Siddhārtha collapses on hearing of his son's departure, "like Indra's banner at the end of the festival" just as Daśaratha had done in similar circumstances. (B. VIII. 73. R. II. lxxiv. 35.) Again

देवानुयानध्वजवत् पपात ।

B. III. 12

echoes the cadence of

प्रभ्रष्टशृंगेन्द्रध्वजवत् क्षितिं गतः ॥

R. IV. xvi. 39.

The picture of the banner when raised in

तमुदीक्ष्य हेममणिजालवलयिनम् ।

S. III. 25

recalls the

खलंकृत इव ध्वजः ।

R.IV. xviii. 3

and carries on in turn to the नवाभ्युत्थानदर्शिन्य of Kālidasa Ragh IV. 3. Now Indra's banner had some special association with the Drama[2] (Bharata N. S. I. 54.). Aśvaghoṣa himself was a dramatist, and there are traces in his Kāvyas of the theory of dramatic Rasa, *e.g.*, the incidental identification of वीर्य and उत्साह in S. XVI. 94 and 97. In what degree does the frequency

[1] Cp. Gawr : S. S. B. L., p. 36.

[2] Cp. also Mahamahopadhyaya Haraprasad Sastri, C.I.E., in T. P., A.S.B., V. 351. Keith Sanscrit Drama, p. 41.

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of the allusion to Indra's banner in the epic and in Aśvaghoṣa imply a mentality permeated with dramatic as well as epic tradition ?

II

Style and Alankara.

The style of Aśvaghoṣa is a curious mixture of naive effort and artificial embellishment. At one time he builds up his lines in well-knit descriptive phrases which on the one hand lack the harmony of the later Kāvya while on the other they are distinctly reminiscent of the structure of the more elaborate descriptive passages in the epic style. At another time he spends his energy in pounding out a long series of nouns or verbs as if nothing mattered but emphasis. While throughout runs an incessant stream of anuprāsa, yamaka, and simple puns typical of an early stage in the development of Alankāra. In particular Aśvaghoṣa seems mentally incapable of using a name or addressing a person without some punning allusion either to the name, or to the character of the person, which may or may not have a special bearing on the context.

The result of all this is to produce a style differing widely in its total effect from that of the epic; but all the leading features of which can at the same time be instanced from the epic. On the penchant for anuprāsa and puns I need not dwell. When Aśvaghoṣa indulges passim in phrases such as

कृत्स्नं कृतं मे कृतकार्य्य कार्य्यं ।

S. XVIII. 10

कुलस्य नान्दीजननश्च नन्दः ॥

S. IV. 6

any reader will agree that the epic of रामाभिराम and रावण लोकरावण has not been without its influence on him. That universal word पद्म provides an excellent instance of Aśvaghoṣa's intermediate position. Such a line for instance as

काचित्पद्मवनादेत्य सपद्मा पद्मलोचना ।

पद्मवक्त्रस्य पार्श्वेऽस्य पद्मश्रीरिव तस्थुषी ॥

B. IV. 36

is exactly the kind of case in which Aśvaghoṣa amplifies an echo from the epic in a fashion which marks a development of style, but might be condemned as insipid by the more cultured standards of the later Kāvya. Incidentally this Sloka well illustrates the habit of repeating himself which gives so academic a tone to Aśvaghoṣa's style. It should be read with S. VI. 26, for which Gawronski quotes R. V. xv. 21 and R. VI. xxxvi. 8.

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leaving no doubt about the influence of the Rāmāyaṇa on this passage.

Or consider the feature of laboured construction, which as a whole it would be difficult to bring under any category of alankāra, but which one appreciates in Aśvaghoṣa, and of which the germs can be found in the epic. Take such a line for instance in the Rāmāyaṇa as

वहन्ति वर्षन्ति नदन्ति भान्ति ध्यायन्ति नृत्यन्ति समाश्वसन्ति ।

नद्यो घना मत्तगजा वनान्ताः प्रियाविहीनाः शिखिनः प्लवंगाः ॥

R. IV. xxviii. 27

and note the double characteristic of piling up verbs and nouns, and the distributive grammar, each verb standing in relation to its own noun. Then carry the principle on to the distributive simile in the Rāmāyaṇa.

सीताकपीन्द्रक्षणदाचराणाम् ।

राजीवहेमज्वलनोपमानि...नेत्राणि ॥

All these elements are to be found often in a rather more elaborate stage, in Aśvaghoṣa's usage. There is the simple piling up of verbs in

रुरोद मम्लौ विरराव जग्लौ बभ्राम तस्थौ विललाप दध्यौ ।

S. VI. 34.

The principle of grammatical distribution is applied in the relation of instrumentals to objectives in

श्रवणांगविलोचनात्मभावान् ।

वचनस्पर्शवपुर्गुणैर्जहार ॥

B. V. 42.

It finds expression again in the distributive simile

गजमेघषभवाजनिस्वनाक्षः ।

B. V. 26. Cp. B. XII. 116.

And finally this simile is itself elaborated with distributive oblique cases

अग्निद्रमाज्याम्बुषु या हि वृत्तिः ।

कबन्धवाग्वह्निदिवाकराणाम् ॥

S. XVII. 59. Cp. B. IX. 16.

We have travelled some way from the simpler epic features, but the course of evolution is obvious.

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One of the stylistic problems of the Rāmāyaṇa lies in the elaborate similes, of a more or less allegorical character, which are embedded in the simpler texture of the epic narrative. In some cases they can be shown with fair certainty to be later than their surroundings, but this is not always the case; and even when they are of a later stratum it does not necessarily follow that this was subsequent to the time of Aśvaghoṣa. Derived no doubt from the allegorical mysticism of the Upanishads this type of simile was peculiarly adapted to the speculative interest of the Buddhist writer. Starting from common ground with the epic, such as the conception of the Fire of Sorrow, or the Sea of Sorrow, he gives to it a distinctly doctrinaire or ethical value; and it is the one type of literary artifice which comes more frequently into use as he goes more deeply into his exposition of Buddhist doctrines in the concluding Sargas of the Saundarananda. Take for instance the Fire of Passion, and the Fire of Sorrow in the Rāmāyaṇa

तद्वियोगेन्धनवता तच्चिन्ताविमलार्चिषा।

R. VI. v. 8

चिन्ताबाष्पमहाधूमः तवागमनचिन्तजः॥

R. II. xxiv. 7

and compare these two with the Fire of Sorrow in the Buddhacharita

शोकाग्निना तद्विरहेन्धनेन निश्वासधूमेन तमःशिखेन।

B. IX. 29.

The similes are not sustained by Aśvaghoṣa point by point in the same details, but the general influence is clear. For the Sea of Sorrow one may compare R. II. lix. 27–31 and B. I. 75. The conventional Wheel of the Law in S. III. 11 represents the fusion of this literary tradition with orthodox Buddhist doctrine.

There is a quite different type of elaborate simile in Aśvaghoṣa, not allegorical, but purely a picture simile, such as the white-robed maiden asleep with her flute resembling the foam-flecked river with bees and lotus. B. V. 49. This type too one can see developing in the more sophisticated passages of the Rāmāyaṇa, but the comparison would be too discoursive for the present purpose.

It is hardly possible to exaggerate the extent to which Aśvaghoṣa is indebted to the epics for the stock similes and rūpakas of his literary repertoire. He is in fact speaking their language, with its illustrations from lotus and creeper, sun, moon and the stars, lightning and clouds, ships buffeted at sea, and travellers astray on land. A special study might be made of what I would call the "similes from consciousness and

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conduct" which this introspective writer frequently uses, and deliberately piles up in certain passages, *e.g.*, B. XIII. 46-51. They turn on the relation of soul and senses, capacity for education, observance and neglect of moral duties, with the consequence in attainment or loss of merit, and generally on topics of psychology and ethical and religious duties. One can probably recognise the personal factor in the prominence given by Aśvaghoṣa to this kind of illustration, but it is to be found already scattered unobtrusively through the Rāmāyaṇa, *e.g.*, R. V. xxviii. 12, R. V. xxix. 1, R. VI. lxiii. 3 and 6. The obscure grammatical simile in S. XII. 9, 10, which is imitated by Kālidāsa (Ragh. xv. 9) recalls the grammatical pedantry which appears so out of place in the narrative of the epic.

रकारादीनि नामानि

R. III. xxxix. 18.

The recourse to Indra, his consort, and his court for illustrations of royal majesty, conjugal well-being, relations of father and son, of priest and monarch, is a commonplace taken from the epic style. And it is worth noticing that this trait becomes most marked in the seventh book of the Rāmāyaṇa, where incessant similes from Indra and his company replace the imaginative fertility of the earlier kāṇḍas.

Two occasional features of style in which Aśvaghoṣa shows the influence of the epic are the rhetorical hyperbole

रविर्मर्त्यं पतेदपि ।

B. IX. 68. Cp. S. VIII. 42.

Cp. R. III. xxxvii. 37–54, etc.

and the rhetorical repetition of the concluding pada of a Sloka B. VIII. 46, B. XI. 23, Cp. R. V. xlii. 18, etc. Even the trick of repeating the same word in different senses, on which Aśvaghoṣa deliberately exercised his ingenuity to the despair of his reader, as in the second Sarga of the Saundarananda, is not without a simpler parallel in the Rāmāyaṇa

परस्परं चाधिकमाक्षिपन्ति भुजांश्च पीनानधिविक्षिपन्ति ।

मत्तप्रलापानधिविक्षिपन्ति मत्तानि चान्योन्यमधिक्षिपन्ति ॥

R. V. v. 11.

The doubling of the gerundive verb to emphasise slow or repeated action is another of the small mannerisms which may be traced from the Rāmāyaṇa

विश्रम्य विश्रम्य पुनः प्रयन्ति ।

R. IV. xxviii. 22

Cp. R. II xlii. 12

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through Aśvaghoṣa

संचिन्त्य संचिन्त्य ।

S. VI. 27. Cp. S. VII. 37

to the classical writers

विश्रम्य विश्रम्य वनद्रुमाणाम् ।

Bhartr. S. S. 21

III

Grammatical and Verbal Resemblances.

It is hazardous for the reader not trained in the traditional Vyakaran to touch on the grammatical comparison of Aśvaghoṣa and the epic. There would be general agreement however that, whether it is the result of his natural position or of conscious archaicising, the grammatical usage of Aśvaghoṣa stands between that of the epics and of Kālidāsa; and, of the two, he is perhaps a trifle nearer to the former than to the latter. Moreover, both in the process of restricting certain liberties of grammatical structure, and of perpetuating one or two mannerisms, one seems to witness the same process of evolution towards the classical standards. Without attempting to enter deeply into these grammatical problems I would adduce a few obvious resemblances.

Of the hall-marks of the epic style Aśvaghoṣa has dropped the unaugmented past tense; but, if the manuscripts are correct, he preserves traces of the Ārsha Sandhi

दित्सन् पितृभ्योऽम्बु इवावतीर्णाः ।

S. X. 10

भूरिद्युम्नो ययातिश्च एते चान्ये नृपर्षभाः ॥

S. XI. 46.

It would obviously be unwise, however, to rely on the limited manuscript authority for a small point like this.

In the syntax of verbs Aśvaghoṣa's flexible use of the infinitive presents certain points for comparison with the epic. The construction with a noun, for instance, is of an archaic character

न कालः परिशोचितुम् ।

R. V. lxvii. 26

कालो हि मे यातुमयम् ॥

B. I. 73. Cp. B. V. 70.

The grammatically remarkable line

प्राप्तकालं प्रवेष्टुं मे कृत्यं साधयितुं महत्

R. V. iii. 34

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with its combination of infinitives of suitability and of purpose might serve as text for a good many of the uses of the tense in Aśvaghoṣa; while, from the other side Aśvaghoṣa's line

ननु नैव क्षमं द्रष्टुं नराः स्त्रीणां स्त्रीणां नराः।

B. IV. 95

with its passive personal infinitive dependent on क्षमम् is reminiscent of usages in the Rāmāyaṇa. For the impersonal infinitive with क्षमम् one may compare

इति वक्तुं कथं क्षमम्।

R. II. xlvii. 9,

and कथं क्षमं वेत्तुमहं ममेति॥ [वक्तुम्?]

S. IX. 36

(Incidentally it may be added that the multifarious meanings and uses of the adjectival क्षम in the neuter and in other forms in Aśvaghoṣa bears more resemblance to the epic than to later practice.)

In the use of the cases one may refer particularly to the instrumental. This case in epic usage is loosely controlled and invested with a peculiar degree of independent force in the sense of description or accompaniment, which is toned down in the later classics. Aśvaghoṣa's use of the case is more sparing and artistic but certainly shows the influence of the epic tradition. Take for instance the line

क एष भोः सूत नरोऽभ्युपेतः केशैः शितैः।

B. III. 28.

Classical canons would incline to interpreting the instrumental as dependent on the participle; but cadence and context alike show that केशैः शितैः is a descriptive adjectival phrase. "Who is this old man approaching, with white hair?" (Cp. निर्ममिरे प्रयातुम् just above.) The piling up of instrumental cases, so common in the descriptive passages of the epic passes into classical tradition, but not this strong independent force; and a line such as

निपीड़यिष्यामि भुजद्वयेन।

विभूषणेनार्द्रविलेपनेन॥

S. IV. 36

"while the ointment is still wet" points distinctly backwards to what may be called the descriptive instrumental absolute.[1]

[1] Mr. E. H. Johnston has however since given me the reading निर्भूषणेन based apparently on better Manuscript authority.

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नेत्राभ्यामश्रुपूर्णाभ्यां सुमन्त्रमिदमब्रवीत् ।

R. II. xxxix. 9.

The simultaneous use of instrumental and ablative *metri gratia*, when no difference can be detected in their meaning, was branded as a definite fault by the classical critics. Aśvaghoṣa, apparently, was aware of nothing wrong with it in the "काव्यधर्म" which he was following, and here too his practice is in accordance with the epic tradition. Compare

भावज्ञानेन ह्रावेन वातूर्याद्रूपसंपदा ।

Cp. B. IV. 12. Cp. B. IV. 26, etc.

and

पराक्रमेण वीर्येण तेजसा सत्त्वगौरवात् ।

सदृशा ह्यत्र दर्पेण रावणस्य दुरात्मनः ॥

R. VI. xxxvii. 22.

These notes on the infinitive and the instrumental are obviously the merest suggestions on the material available. Other general lines of resemblance might be found in following out the use of the non-descript case ending in अतः and of the adverbial वत्. Both these details are of much more frequent occurrence in Aśvaghoṣa than in the later writers, and his freedom in handling them contributes to the archaic effect of his style. More easily pointed out are small grammatical mannerisms, in which are to be found precise echoes of the epic. Such for instance is the use of this case ending in अतः with a verb of motion in the sense of forming an opinion

अशुभं शुभतो गच्छसि ।

S. VIII. 48

न माम् दोषतो गन्तुमर्हसि ॥

R. VI. civ. 13

(though Aśvaghoṣa generally uses a verb of sight with अतः in this sense). Again the double adverbial particle क्व च .....क्व च, which has made a niche for itself in literature in one well-known passage of Kālidāsa Raghu I. 2, can be traced on its way from the Rāmāyaṇa through Aśvaghoṣa. There is a parallel in its use for contrast between royalty and asceticism which is a particularly good example both of Aśvaghoṣa's imitative method and of his elaboration on the epic style

क्व चारण्यं क्व च ह्यात्रं क्व जटाः क्व च पालनम् ।

R. II. cvi. 18

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विमानशयनार्हं हि सौकुमार्यमिदं क्व च।

.....तपोवनमही क्व च।

B. VI. 18.

And one may quote also its use for personal relationship.

क्व च स्वजनसंवासः क्व च नीचपराश्रयः।

R. VI. lxxxix. 14.

क्व चानुवृत्तिर्मयि सास्य पूर्वं।

त्यागः क्व चायं जनवत् क्षणेन॥

S. VI. 19.

Compare another forcible instance in S. X. 71.
The कदा of hope deferred which is well established in the classical tradition, (e.g. Kadambari p. 128 Bombay ed. कदा मे तनयजन्म etc.) has a similar history.

कदा नु खलु सुश्रोणीं द्रक्ष्यामि।

R. VI. v. 12. Cp. R. III. xvi. 40.

आरण्यकं द्रक्ष्यामि नन्दं...कदेति॥

S. XVIII. 33.

A more trivial mannerism is the use of वा न वा at the end of a line to denote alternatives, to which Aśvaghoṣa is particularly prone in his more routine passages towards the end of the Saundarananda

सुखानि यत्नेन भवन्ति वा न वा।

S. IX. 39.

Cp. S. X. 62.

It recalls the tag यदि जीवति वा न वा which occurs three or four times in the Rāmāyaṇa; and might well stick in the reader's mind for commonplace use. (e.g. R. III. lx. 14. III- lviii. 11. V. xx. 26 without यदि,)

In point of vocabulary there are a few words used by Aśvaghoṣa, and found in the Rāmāyaṇa, which are so distinctive in character that the later writer may be believed to have taken them consciously or subconsciously from this source. Close study of the Mahābhārata would no doubt similarly reveal the provenance of other unusual words चतुष्पद, something to do with the lay-out of a city, which occurs only once I believe in the Rāmāyaṇa, and puzzles the commentators.

चित्रामष्टापदाकारां वरनारीगणायुतां।

R. I. v. 16

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reappears in a parallel context in the Saundarananda

अष्टापदमिवालिख्य ।

S. I. 32.

The coincidence is of some importance as tending to establish Aśvaghoṣa's acquaintance with the opening Sargas of the epic in their present form. The word उत्तरासङ्ग in व्याघ्रोत्तरासङ्ग । B. XIII. 22, which I previously suspected, seems to be established by चीरोत्तरासङ्ग in R. II. i. 48, however one may interpret Aśvaghoṣa's adaptation. Similarly फलति in the sense of a loud noise

द्यौः फलतीव सत्वा ।

B. XIII. 52

is paralleled exactly by its use in the Rāmāyaṇa

फलतीवास्य घोषेण गगनं ।

R. V. lviii. 18

Cp. R. VI. xxii. 6.

Less distinctive, but worth quoting, is पृथग्जनः at the end of the sloka in B. IX. 68. (text probably corrupt somewhere) and, in the same context of the contrast between sinner and saint, in R. IV. xxxiv. 8 Aśvaghoṣa's careful distinction of निशम् "to see" from निशम् "to hear" has a good deal of authority in the Rāmāyaṇa, though there are exceptions. The rather puzzling verb जृम्भ and विजृम्भ can be better understood by comparison of instances scattered through Aśvaghoṣa and the Rāmāyaṇa.

Gawronski[1] notices the frequency in Aśvaghoṣa and the Rāmāyaṇa of the word वैडूर्य which, according to him, tends to disappear in the later classics.

IV

Moral Instances.

Was it vanity of Sanscrit learning or earnestness of Buddhist teaching, that caused Aśvahoṣa to introduce into his Kāvya long strings of moral instances from famous names of the past? Not necessarily either. Here too he was carrying on the epic tradition. The Rāmāyaṇa, in passages rather of fervent appeal than of didactic insistence, pauses to dwell on examples from familiar names, such as those of saints who went to Heaven, (R. II. lxiv. 42) or of faithful wives. (R. II. cxviii. 10–12. V. xxiv.9–13.)

[1] G. N. S. p. 17.

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यां गतिं सगरः शैव्यो दिलीपो जनमेजयः ।
नऋषो धुन्धुमारश्च प्राप्ताः तां गच्छ पुत्रक ॥

R. II. lxiv. 42

Aśvaghoṣa, in consonance with the spirit in which he follows the epic, elaborates this type of writing. In place of a few lines of incidental references he piles up whole batteries of moral instances to support the argument. He has, of course, a still wider range to draw on than had the epic; for in addition to the epic stock he has behind him the Jātaka legends, that of Sivi for instance being a typical example. (S. XI. 42. B. XIV. 30.) Not only so but apparently he does not exclude even quite recently deceased Buddhist divines. At the same time it is characteristic of the rather limited and academic range of his literary powers that his mind is constantly recurring to the same stock examples, and in very much the same language. In fact he is often not fashioning an instance from his epic material, but making use of an old stock instance that had served the epic.

And naturally the application of these instances takes on a new philosophic tone. Faithful wives interest Aśvaghoṣa less than deluded saints and erring women, whether adduced as a warning against the frailty of the flesh (B. IV. 16–20 and S. VIII. 44-45) or as a temptation to the waverer. (B. IV. 72–80 and S. VII. 24–45). Nahuṣa, named in the sloka from the Rāmāyaṇa quoted above, now appears, among a number of other examples, to illustrate not the attainment of Heaven but the transitoriness of the heavenly state as of all other sensual delights. (S. XI. 42–51 and B. XI. 13–18.) Other topics similarly instanced are problems of the religious conscience such as the breaking of ascetic vows, (B. X. 58–61 and S. VII. 51) the fulfilment of dharma by royalty (B. IX. 20) and methods of attaining Moksa. (B. XII. 67.) Incidentally it is worth noticing how this essentially didactic method, as it is in Aśvaghoṣa, becomes of purely literary value, or is perhaps consciously parodied, in a well-known passage of the Daśakumāracharitam, the harlot and the saint, where one of Aśvaghoṣa's instances actually reappears

अचीपतेरहल्याजारता

Daśak: Kale 1917, p. 70.

It would obviously be the task of years to fix on the source from which each legend is quoted. All that one can attempt to do is to show that the Rāmāyaṇa was one of the sources specifically in mind. To begin with, many of the names mentioned in the brief passages cited from the epic are scattered through Aśvaghoṣa's poems in one context or another. But a few more precise parallels may be picked out.

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The legend of Indra and Ahalyā for instance, twice referred to by Aśvaghoṣa as an instance of surrender to the passions, (S. VII. 25 and B. IV. 72) is an incident in the mass of loosely connected legendary material which swells the Uttarakāṇḍa (R. VII.xxx); and must surely be part of its latest stratum. Aśvaghoṣa appears to be drawing directly on the legend as here set forth, and not without verbal reminiscence

सा त्वया धर्षिता शक्र कामार्तेन समन्युना ।

R. VII. xxx. 30

कामं परमित ज्ञात्वा देवोऽपि पुरंदरः ॥

B. IV. 72.

The household legends of Yayāti and Nahuṣa occur in the same Kāṇḍa, (R. VII. lix) but cannot be shown to have provided material for Aśvaghoṣa in the form in which they are there related. All that can be said is that, like the epic writer, he has a peculiar fancy for the two names often in conjunction, (B. II. 11, B. IV. 78, B. XI. 14, S. XI. 44 and 46). And what he does definitely adopt from the epic is the use in the earlier Kāṇḍas of Yayāti's fall from Heaven as a stock legendary instance.

ययातिमेव पुण्यान्ते देवलोकात् परिच्युतम् ।

R. II. xiii. 1

ययातिरेव राजर्षिः पुरा च्युत्वा पुनर्दिवम् ॥

R. II. xxi. 47

Cp. also R. III. lxvi. 7 ; IV. xvii. 9

भूरिद्युम्नो ययातिश्च .....

कर्मभिर्द्यामभिक्रीय तत्क्षयात् पुनरत्यजन् ।

S. XI. 46.

There is a still closer verbal reminiscence in the allusion to Visvámitra and Ghṛtácī among the many instances of women and saints

घृताच्यां किल संसक्तो दश वर्षाणि लक्ष्मण ।

अहोऽमन्यत धर्मात्मा विश्वामित्रो महामुनिः ॥

R. IV. xxxv. 7

स गाधिजश्चापहृतो घृताच्या समादशैकं दिवसं विवेद ।

S. VIII. 35.

The allusion to Māndhāta seems again to imply knowledge of the Uttarakāṇḍa; and at the same time, unless some other

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source more relevant can be quoted, is an interesting little case in which Aśvaghoṣa rather strays from the point in repeating a stock instance. Sarga lxvii of the Uttarakāṇḍa tells how Māndhāta was deluded by Indra into leaving Heaven to complete the conquest of the world

अर्धासनेन शक्रस्य राज्यार्धेन च पार्थिवः।

वन्द्यमानः सुरगणैः प्रतिज्ञामध्यरोहत ॥

R. VII. lxvii. 8.

Half Indra's throne was not satisfaction enough. The Buddhacharita quotes the legend, with an unmistakeable verbal allusion, to illustrate the insatiability of sensual desire, where it is very much in point

शक्रस्य चार्धासनमप्यवाप्य।

मान्धातुरासीद्विषयेष्वतृप्तिः ॥

B.XI. 13. Cp. S. XI. 43.

The Saundarananda however refers to it in illustration of the transitoriness of the heavenly state, an application which distinctly loses relevance if this is the legend still in mind. Sagara, twice alluded to by Aśvaghoṣa (B. I. 49 and S. I. 25) is an important figure in the legendary Sargas of the Bālakāṇḍam, and it may be noticed, leads off the list of successful saints in the Sloka quoted. (And incidentally it is worth drawing attention to this tendency of Aśvaghoṣa's to think of the same names, not merely in the same context, but even in corresponding stages of his two poems.) Finally one may mention the purely verbal reminiscence in the allusion to the divinity Māyā

मायेव दिवि देवता।

S. II. 49

निदधे रावणः सीतां मयो मायामिवासुरी ॥

R. III. liv. 14.

On the other hand, these points of contact being established, it is surprising to find how far away from the Rāmāyaṇa Aśvaghoṣa is in his allusions to some of its most familiar names, such as Pururavas and Urvasi. In such cases he has obviously in mind an entirely different set of legends. Gawronski's identification of Gotama Dīrghatapas in S. VIII. 45 is an excellent case of fixing a rather obscure allusion definitely on to a passage in the Mahābharata. Cowell quotes Manu IX. 23 on the reference to Akṣamāla and Vasistha in B. IV. 77. Such instances to the contrary are a warning against attaching exaggerated importance to these allusions to legends found in the Rāmāyaṇa.

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Conclusion.

To sum up, it is sufficiently clear that the Buddhist scholar in composing his Kāvyas was very much under the influence of the epic tradition, and one may say perhaps especially of the Rāmāyaṇa, with its initial theme so akin to his own. But the ultimate question about his relationship to the epic stratum of Sanscrit literature, and one on which this bare comparison throws little light, is this. Was Aśvaghoṣa carrying on a still living Kāvya-epic tradition, or was he looking back across the dust of ages, and over a great gap in Sanscrit culture caused by Buddhism, to epics which were for him a dead language? Was his position analogous to that of the cyclic poets or even of Aeschylus in the Homeric tradition, or to that of Apollonius Rhodius who wrote a consciously imitative and artificial epic in the grammar schools of Alexandria. Close study of the later Kāvya elements in the Rāmāyaṇa might throw some light on this question, which is of fundamental importance for the history of Sanscrit literature.

In conclusion I must express my sense of the imperfection attaching to an article of this kind. It is a subject to be studied piece-meal and not on the grand scale. In the great bulk of the Rāmāyaṇa other readers will find other aspects for comparison, and other parallels, many no doubt more apposite, than those I have noticed. And some of these inevitably slip from one's grasp in the course of working the comparison up.

Mymensingh.
The 25th Feb., 1928.

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The Historical Stone Horse in the Lucknow Museum.

By JAGANNATH DAS RATNAKAR.

In an article headed "Discovery of a new Historical Stone Horse," published in the Indian Historical Quarterly of December, 1927, a Hindi version of which had previously appeared in the Nagari-Pracharini Patrika Vol. VIII, I made an incidental reference to the Historical Stone Horse preserved in the Provincial Museum of Lucknow. From a historical point of view, the horse appeared to me very interesting and deserving of more minute and serious attention than has hitherto been paid to it. I therefore devoted to its critical study as much of my time as I could spare. The results of my study, as well as the theories and ideas that suggested themselves to me, are embodied in this article for the information and consideration of the scholars of Archæology and Epigraphy. Even if my attempt be regarded by the Archæologists and Epigraphists as an undue meddling, I hope, they will look upon it with indulgence, as it will have the merit at least of inviting their attention to a hitherto neglected relic of yore and suggesting a key to the decipherment of the so-called conch characters.

Below I give, for ready reference, the informations that I could find about the horse in different books.

"Another memorial of the event seems to exist in the rudely carved stone figure of a horse which was found in northern Oudh and now stands in the Lucknow Museum with traces of a brief dedicatory inscription incised upon it apparently referring to Samudra Gupta."

(Vincent Smith's Early History of India, 3rd Ed. p. 288.)

"The fact that the mutilated inscription '———dda-guttasa deyadhamma—' is in Prakṛta suggests a shade of doubt. All other Gupta inscriptions are in Sanskṛta (J.R.A.S., 1893, p. 98 with plate). See Fig. 11 in plate of coins. The horse having been exposed to the weather, outside the Lucknow Museum for years, the inscription has disappeared. The image is now inside the building. The inscription was legible when the first edition of this book was published."

(Vincent Smith's Early History of India 3rd Ed., p. 288, Footnote.)

"The fact that Samudra Gupta actually performed the solemn rite is vouched for by the inscriptions as well as the

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reverse legends of the medals. It seems also to be commemorated by a very curious sculpture preserved at Lucknow. This is the life-size figure in stone of a small horse which was dug up some years ago near the ancient fort of Khairigarh in the Kheri district, on the border between Oudh and Nepal. Khairigarh was evidently a place of importance in ancient times, and Gupta coins are found in the neighbourhood. The stone horse bears on the right side of its neck an inscription of which the letters '———— dda guttasa deyadhamma—' are legible. The first word must clearly be restored as 'Samudda' and the three words must be translated as 'the pious gift of Samudra Gupta.' The sculpture which stands in the open air, at the entrance of the Lucknow Museum, is accordingly labelled as being the sacrificial gift horse of Samudra Gupta."

"The artistic merits of the work, as will appear from the accompanynig plate I., prepared from a photograph kindly supplied by Dr. Führer, are contemptible. The letters of the inscription are so faintly engraved that they are barely discernible in the original photograph, though the reading appears to be quite certain. All other Gupta inscriptions are in purely classical Sanskṛta, and it is curious that this brief record should be in Prakṛta. I do not think that the word 'deyadhamma' is found in any other Gupta record."

(Observations on Gupta Coinage by Vincent Smith, published in the J.R.A.S. 1893, p. 98.)

"About two miles north-west of the fort (Khairigarh) stood till 1885 the life-size stone figure of a horse buried in dense jangal; though of a rude workmanship it is nevertheless interesting on account of a fragmentary Gupta inscription of Samudra Gupta being incised on the right side of the neck. The attitude is stiff and the workmanship of the legs is hard, weary and unnatural, but the back is skilfully caparisoned. Judging from the inscription, it is meant to be a substitute for a real, but costly, sacrificial horse. The stone horse is now standing in the compound of the Lucknow Provincial Museum."

(Führer. Monumental Antiquities of N.W.P. and Oudh, p. 285.)

"The earliest relic which can be dated with some certainty is a stone horse which formerly stood in thick jungle two miles from the fort of Khairigarh, and is now at the Lucknow Museum. Its attitude is stiff and conventional; but it resembles closely the figure depicted on a rare coin of Samudra Gupta, and a fragmentary inscription mentions that monarch, who flourished in the fourth century A.D."

(District Gazetteer of the U.P. Vol. XLII. Kheri, p. 135.)

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All these extracts with slight verbal differences practically come to the same thing and can be summed up in the following few lines :

A rudely carved life-size stone figure of a small horse was found standing in dense jungle about two miles south-west to the ancient fort of Khairigarh, in the Kheri district of Oudh. It bore on the right side of its neck a mutilated inscription of which the letters ".....dda guttasa deyadhamma," could be deciphered. The first word was restored as "Samudda," and the whole inscription was translated as "the pious gift of Samudra Gupta." The horse was regarded as a memorial of the Horse-sacrifice of Samudra Gupta. After 1885 it was brought to Lucknow and is now preserved in the Provincial Museum. The inscription was legible when the first edition of Mr. Vincent Smith's Early History of India was published ; but having been exposed to the weather for some years it quite disappeared by the time the book was prepared for its third edition. Its being in Prakṛta has suggested some doubt to scholars, as all other Gupta inscriptions found up to the time are in Sanskṛta. The horse resembles closely the figure found on a rare coin of Samudra Gupta. There is an artistic engraving on its back which has been regarded by Dr. Führer as a skilful ornamentation of the caparison. Mr. Vincent Smith is quite certain as to the reading of the inscription which was discovered on the neck.

Besides the doubt that was created in the mind of Mr. Smith, owing to the inscription being in Prakṛta, the fact that an inscription, that could maintain its legibility, under all the inclemencies of weather in the jungle of Khairigarh, for more than 1500 years, should totally disappear in so short a time after that in the Lucknow Museum, also appeared to me somewhat curious. I consequently, proceeded to Lucknow and personally inspected the horse and examined the spot where the inscription is said to have existed. The result of my inspection and examination is given below.

Besides the information given above, I noted the following additional points in respect of the horse :—

It consists of a hard variety of reddish stone and is carved together with the pedestal in one block. Its fore legs are joined together by the extra stone left between them and the hind legs are also so. The tail is practically destroyed ; but it is evident from what is left of it that it was connected to the unremoved stone between the hind legs. In these respects it resembles the Benares horse, described in the article mentioned above. Both of its ears are wanting. Nor do they seem to have ever been made in relief. The spots where they should have stood are a little raised and enclosed with lines engraved round them. From this fact it may be inferred that the figure was meant to imitate a horse whose ears had been cut off. The facial

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appearance is sombre and gloomy as befits a doomed creature. It measures 6′ 11″ by 5′ 2″. It is represented in plate No. 10.

Besides the passages quoted above and the points noted by myself, I could collect no other information about the horse. It is quite possible that an estampage of the neck inscription with some notes about it may be found in some book, but I could lay my hand on no such work.

I looked for the inscription referred to above on the neck, but in vain. No trace of any letter could be found on either side of the neck. Some indefinite marks could of course be seen. But they could well be said to be the marks of the chisel of an unskilful workman. My friend, Rai Prayag Dayal Sahib, the Curator of the Museum, who has always been good enough to help me in all such matters, however, told me that there were some marks resembling old characters visible on the neck some years ago. In an impression of the inscription taken on the occasion some old characters were faintly discernible too. But they were quite illegible.

Though my curiosity as regards the neck inscription was not satisfied, yet my trouble in visiting Lucknow did not go unrewarded. On scrutinising the ornamental design on the back, which was taken to be only a decorative design of the caparison by Dr. Führer, and left unnoticed by Mr. Vincent Smith and others, up to the present, with the same or similar thought, I was inspired by the idea that it might contain some inscription in ornamental characters of the time. It consists of a line of some floral marks in the middle of the back, running lengthwise, from near the loin to near the withers, with some other marks of different shapes and sizes on both sides of the line, and both above and below it (see Plate No. 11). The engraving, as a whole, is in a fairly good state of preservation and has well defied the ravages of more than 1500 years. When I communicated my idea to Rai Prayag Dayal Sahib, he said it was probably some pictorial writing or a conch inscription as the archæologists designate it.

I tried to decipher the same, but could not do so at the time. I then requested the said Rai Sahib to supply me with an estampage of the full engraving on the back of the horse, which he did cheerfully with his usual obliging courtesy. On bringing it home I tried to find out some clue for reading the line: but all my attempts failed for the time being.

One day, however, while looking at it, an idea struck me that if the engraving was really a floral inscription it must necessarily contain lots of superfluous ornamental strokes, which should be left out of consideration in trying to decipher it. With this idea I concentrated my attention only on the middle line, leaving aside the surrounding strokes which appeared to me to be superfluous and merely ornamental extensions.

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This line, which resembles somewhat a chain, seemed to me to consist of six links. But then the shapes of these links resembled one another so closely that no advance could be made towards their deciphering. The similarity between the slanting lines both above and below each part led me to think that the idea of their being letters was merely a mistake, and that the engraving was really some ornamental design, for, I thought how could the letters of an inscription be so similar to one another. With this idea, I was just about to give up all hope of deciphering the line, nay, even of the possibility of its being an inscription, when my attention was suddenly attracted to the dissimilarity between the middle portions of those similar lines. It then struck me at once that those similar strokes were also ornamental portions, and that if there were letters, the portions lying between those similar lines alone could be so. With this idea I gave my thought only to the middle portions, discarding even those similar slanting strokes (see Plate No. 12).

Having got rid of the ornamental superfluities, all the parts of the line presented marked difference in their shapes, which supported the possibility of their being letters, though still the difference between the first and the second letters was not clearly discernible, and the fourth and the fifth letters appeared to be quite similar. In this simplified form though it became fairly certain that the line was some inscription, yet it remained still a puzzle.

After repeated attempts at guessing, I was one day led to regard the third letter to be ग (g), (see the Palæography of India, Plate 16), and in the light thus received the fourth letter, together with the semicircular stroke beneath it, which was at first discarded as superfluous, appeared to be प्त (pta), (see the same plate). Thus the third and the fourth letters together were guessed to read as गुप्त (Gupta), though the U-vowel mark beneath the ग (g) was still indiscernible.

This guess made me pretty sure that the inscription contained the name of some Gupta king. Now, having regard to the fact that there were only two letters before the word (Gupta), it was also certain that the word formed by them must necessarily consist of two letters, such as चन्द्र (candra), स्कन्द (Skanda), बुध (Budha), etc. But the first letter resembled the च (c) of the Gupta period so closely, (see the same plate of the Palæography of India), that I concluded the first two letters to be चन्द्र (Candra), though there was considerable doubt, at the time, as to the second letter being न्द्र (ndra). But then I could hit upon no other name amongst the Gupta emperors having च (ca) as its first letter. Thus the first four letters were guessed to be चन्द्रगुप्त (Candragupta).

The fifth letter being similar to the fourth it could also

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presumably be regarded as प् (p). But I could make no definite guess, at the time, in respect of the sixth letter.

I consulted my friend, Rai Śyam Sundar Das Sahib, about my reading. He said it was quite a reasonable guess and might prove to be correct in the end.

I then again proceeded to Lucknow to examine the original inscription more minutely, so that the uncertainty and doubt in the real shapes of the letters, commonly caused by the imperfectness of ordinary impressions, might be removed. In this visit I directed my attention more particularly to those points which were doubtful, and I was glad to find that my guesses were strengthened by the re-examination.

I must here express my sense of obligation to Rai Prayag Dayal Sahib, who gave me every facility for examining the inscription and kindly made all necessary arrangements for my studying the same.

The forms which the letters presented after a minute scrutiny of the original amply justified my reading of the first four letters as चन्द्रगुप्त (Candragupta), and enabled me to read the fifth and the sixth letters together as पितु: (pituh).

In plate No. 12 given with this article, the misleading stone marks have been filled up, and the shapes of the letters and ornamental lines, as determined by the re-examination, have been clearly brought out. Besides, for the convenience of the readers, the ornamental lines have been printed in colour, so that the letters may be quite distinguishable from them.

The form of the first letter, as shown in plate No. 12 of this article, needs no comment as regards its being च (ca).

The second letter न्द्र (ndra) of this inscription, as shown in plate No. 12. differs a little from the न्द्र (ndra) of the Gupta inscription reproduced in plate No. 16 of the Palæography of India. The upper parts of both of them, representing न् (n), are, however, quite similar. But their middle portions, forming द् (d), differ in form. In addition to the difference in the direction of their curves, the lower end of the द् (d) in this inscription, after turning to the left, terminates in a small downward stroke ; while that of the द् (d) in the said Gupta inscription turns to the right. The द् (d) of this inscription corresponds in shape to that of the plate No. 4 of the Palæography of India. The र (ra) attached to the lower portion of द् (d) in this inscription is somewhat more curved and extended than the र (ra) found thus attached in the Gupta inscription of the Palæography of India. This may be said to be due to its occurring in an ornamental writing. Moreover, somewhat more extended and curved attached र (ra) is to be seen in plate No. 18 of the said book also.

In re-examining the original, a small hook-like turning to the right was discovered in the lower end of the right leg of the third letter ग् (g), which might well be taken to be the उ-मात्रा

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(U-vowel mark) attached to it, (see the U-vowel mark attached to गु in plate No. 16 of P. I.).

As regards the fourth letter being प्त (pta) there was not much doubt even in the beginning. I have, consequently, to add nothing to what I have already said about it.

Thus my reading of the first four letters as चन्द्रगुप्त (Candragupta) was amply supported and confirmed by the re-examination of the original.

The fifth letter being similar to the fourth, no comment is necessary to identify it with प् (p). The curved line, which starting from its middle proceeds upwards inclining to the right and which after a turn has been converted into an ornamental spiral circle, has been taken by me to be the इ-मात्रा (i-vowel mark) attached to प् (p). In plate No. 16 of the P. I., the Mātrās of इ (i-vowel marks) are no doubt, found inclining to the left, but in the 10th and 20th plates of the I. P. they are seen inclining to the right also.

The identity of the sixth letter was in some doubt for a long time. Its appearance did not, at first, seem to correspond with any such letter which, in combination with the fifth letter पि (pi), could form a fitting word. I was often tempted to regard it as त (t), but the small line in its belly which seemed to be joined to, or to be an extension of, the curved ornamental line over it, proved repulsive to the presumption. In the end, however, an idea suggested itself to my mind that the thick line in the belly was neither joined to nor was a part of the ornamental curved line over the letter; it was rather an extension of the small ornamental line which shoots off from the bigger one to the right of the letter, as shown in Plate No. 12, and that it seemed separated from the small ornamental line only owing to the stone of the spot being worn out. Then, on looking more carefully, a small protuberance was also discernible on the top of the letter. These facts identified the sixth letter with तु (t). The semicircular stroke beneath it was then taken to be the उ-मात्रा (U-vowel mark) attached to it, and the two indistinct dots to the right of the letter were guessed to form the Visarga mark. Thus the sixth letter was read as तुः (tuh).

In this way the fifth and sixth letters together were read as पितुः (pituḥ), and the whole of the middle line as—

चन्द्रगुप्तपितुः

(Candraguptapituḥ.)

Besides the letters in the line, there are two more letters in the inscription, one over the first and the other over the fourth letter of the line. At first I had thought them to be some ornamental forms. But in my second visit to Lucknow I marked some such figures in a hitherto undeciphered stone inscription preserved in the Museum. I consequently took

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them also to be some letters, and applied myself to their deciphering.

The form of the first letter, as shown in Plate 12, leaving aside the arm attached to the right, corresponds to अ (a) of the old characters, (see I. P., plate 16). Now if the arm attached to the right be taken to be the ओ-मात्रा (o-vowl mark) attached to it, as seen in plate No. 10 of I. P., then the letter may be read as ओ (o). If it can be presumed that the Anuswar-vindu (n-sign mark) is merged in the ornamental line, that begins from above the letter, or that it has somehow or other been effaced, then the letter can be read as ओं (Om).

The form of the second letter over the line is that of a horn, of which the top inclines to the left, and which has a horizontal line within it. This may be said to be of the form of श (ś) in old writing. In the aforesaid plate No. 16 though the top of श (ś) is seen to be flat and rounded, yet the top is also found pointed in old inscriptions (see plates Nos. 1 and 2, in I. P.). The left-ward inclination and horn-like appearance of the letter may be said to be due to its ornamental character. There is a curved line attached to the foot of the right side of the letter which advancing to the left meets the ornamental line to its left. This can very well be taken to be र (ra) attached to श् (ś). The curved line, which starts from the top of the letter and advancing upwards becomes an ornamental line running to the left of it, may be regarded to be the ई-मात्रा (ī-vowel mark), (see ī-vowel mark in plate No. 19 of I. P.). Thus the second letter over the line may be said to be श्री (Śri).

According to what has been said above the reading of the whole inscription may be said to be as follows :—

ओं श्री

चन्द्रगुप्तपितुः

Om Śrī

Candraguptapituḥ.

It may be noted here that I am not yet quite sure as to the reading of the two letters over the line.

If my reading of the line be regarded as correct and that of the effaced inscription, as deciphered by European scholars Dr. Führer and Mr. Vincent Smith, also so, then we have to face two difficult questions, requiring satisfactory explanations. The first question would be as to who did actually set up the horse, *i.e.*, Samudra Gupta or Candra Gupta ; and the second point would be as to why one inscription should be in Sanskṛta and the other in Prakṛta.

If we regard the horse as having been set up by Samudra Gupta, the father of Candra Gupta, then we are confronted with the curious fact of his designating himself by the name of his son, the general practice being to designate oneself by the

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name of one's father and not by that of one's son. If, however, this horse be said to have been set up by Candra Gupta, then the question arises as to why he should have inscribed it as his father's and not as his own. A plausible reply to this question would seem to be that the horse was installed by Candra Gupta in memory of his father after his death, and consequently he got it inscribed over with the words 'समुद्दगुत्तस-देयधम्म' ('Samudda guttasa deyadhamma') and identified Samudra Gupta as his father. But we have to bear in mind that the stone horse 'resembles closely the figure depicted on a rare coin of Samudra Gupta' or his medal, which raises the presumption that the horse was in existence at the time of striking the coin or medal, *i.e.*, in the life-time of Samudra Gupta. This objection may be met by holding that the figure on the coin was not made after the stone horse, but, rather, the stone horse was made, by Candra Gupta, in imitation of the figure on the coin of Samudra Gupta, to commemorate the Horse-sacrifice, on the occasion of which such coins were struck. This would, of course, be a very reasonable reply to the objection. But it must be remembered that Candra Gupta came to the throne after the death of Samudra Gupta, when Ajodhya, if not actually the capital of the vast Gupta empire, was one of the most important seats of government, as Mr. Vincent Smith has rightly said in his Early History of India. So, had the horse been set up by him after his accession, it must have been placed at the capital or some important sacred city, and not at Khairigarh, which, though an important place owing to its being on the border between Nepal and Oudh, could not enjoy the rank of a capital. Nor was it any important sacred place.

The difference of language and place of the two inscriptions raises the question as to whether the two inscriptions are to be regarded as parts of one and the same inscription or as different ones.

If we regard the neck inscription to be in continuation of the back one, then the whole inscription would run thus—

'चन्द्रगुप्तपितुः समुद्दगुत्तस देयधम्म'

'Çandraguptapituh Samuddaguttasa deyadhamma.'

On this supposition one-half of the inscription would be in pure Sanskṛta and the other half in Prakṛta, which would be repulsive to the established custom. Besides, there would be the unreasonableness of dividing one sentence in two places, inspite of there being sufficient room on the back for both of them. If, however, the two inscriptions be regarded as independent of each other, then an explanation is necessary as to why there should be two inscriptions having the same meaning, as the purport of both of them is practically the same.

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I venture to make the following suggestions, for the consideration of the experts as affording a satisfactory explanation for both the difficulties.

Çandragupta, as we learn from Mr. Vincent Smith's history, had made himself an important factor, even in the life-time of his father, both in administrative and military affairs. If we now assume that the politically important district of Kheri, with the surrounding country, was placed under his governorship, where he acquired popularity and fame owing to his administrative and military qualities, then both the anomalies may be thus explained. When his father performed the Horse-sacrifice he set up in his province, a stone horse, resembling the figure of the horse depicted on the medals, struck on the solemn occasion, in commemoration of the important event, both as a token of his paternal love and as a political step towards raising the dignity and prestige of the empire, in the eyes of his troublesome neighbours. As he was the most renowned and popular personage in the vicinity, he got an inscription engraved on it in Sanskṛta, saying that it was his father's चन्द्रगुप्तपितुः (Çandraguptapituh). Then seeing that the pictorial writing was difficult to be read by the people, as it always is, he got another inscription engraved on the neck in ordinary characters and popular language of the time, meaning practically the same thing. In this inscription instead of चन्द्रगुप्तपितुः (Çandraguptapituh), he put समुद्दगुत्तस (Samuddaguttasa), and expressly mentioned (deyadhamma), which was understood in the Sanskṛta inscription.

As regards the horse having been made without ears, I hold the same opinion as I have already expressed about the Benares horse having been made only with one ear.

As regards the reading of the neck inscription, I may observe here that though the compound देयधम्म (deyadhamma) is quite a good one, yet it is of very unfrequent occurrence, as Mr. Smith has himself frankly noted. So, if we regard the word to be misread for दयाधम्म (dayādhamma), we can have quite an appropriate compound for the sentence, and of frequent use with the Jainas and Boudhas. In such a case the inscription would mean 'Samudra Gupta's compassion-duty,' signifying that the earless horse was intended to indicate the compassion which Samudra Gupra religiously cherished towards God's creatures, as showing that, even on the occasion of a Horse-sacrifice, he refrained from destroying the life of an animal.

If, however, the reading of Mr. Smith be taken to be right, its English rendering as 'pious gift of Samudra Gupta' cannot be said to be quite accurate. It should in such a case be 'giving (dedicating or endowing) piety of Samudra Gupta.'

Before finishing the article, I must express my sense of gratitude to my old friend, Rai Śyam Sundar Das Sahib, who

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has taken a deep interest in the reading and publishing of the inscription and made valuable suggestions towards the same.

(It may be noted here that, an article on the inscription has already appeared in Hindi, in the Nagari-Pracharini Patrika of Benares, in Vol. IX, Issue I.)

SHIVALAGHAT, BENARES.
12th May, 1928.

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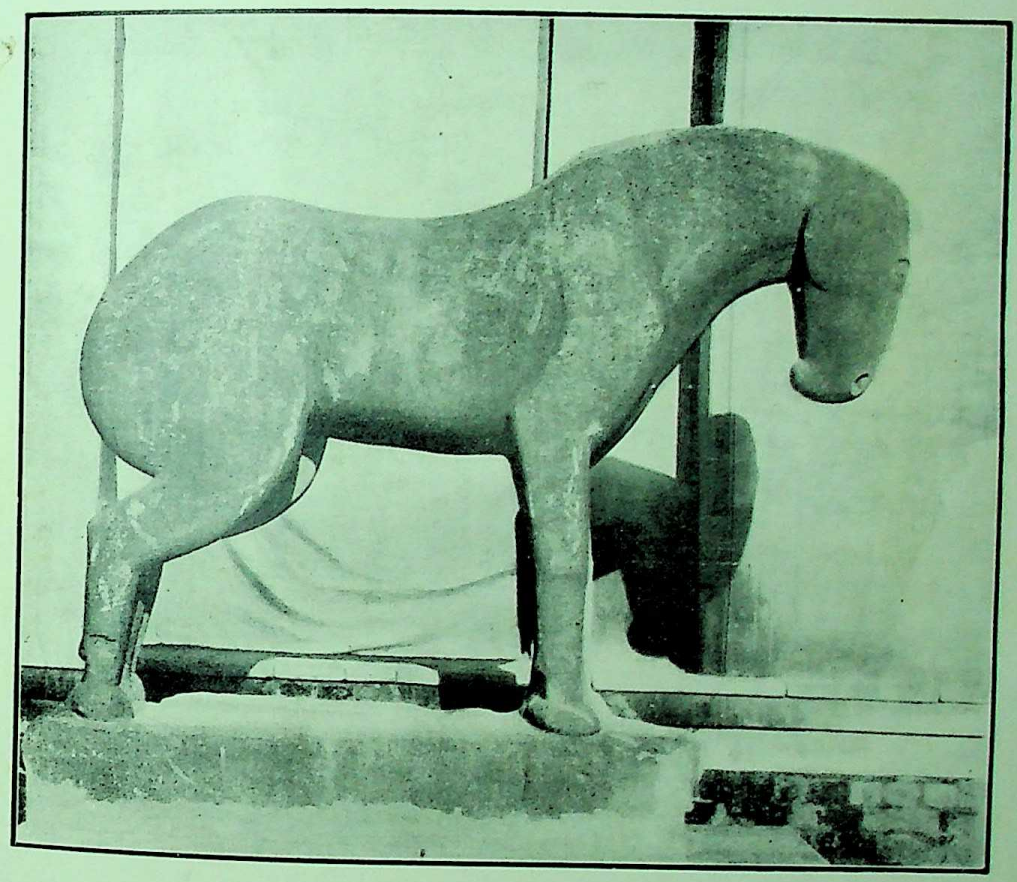

Stone statue of a horse set up by Samudra Gupta.

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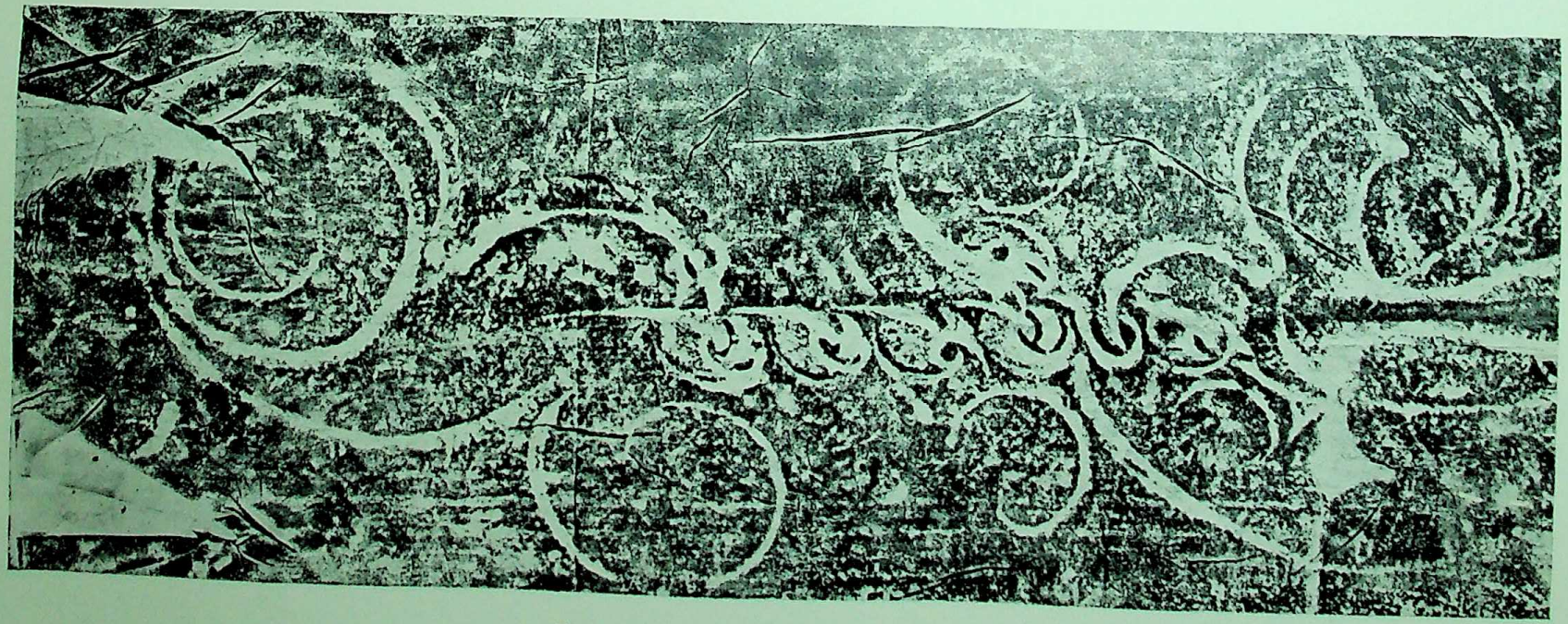

Mechanical reproduction of the inscription.

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Ishwarchandra Vidyasagar as a Promoter of Female Education in Bengal.

(*Based on unpublished State Records.*)

By Brajendranath Banerji.

If the 18th century saw a revolution in the political history of Bengal, the 19th century saw another and equally far-reaching revolution in our life and thought. This second change has been rightly called the Renaissance of India. At the time of the English conquest, not only were our indigenous kingdoms in utter dissolution, but our society also was decayed and our mediaeval civilization was dead. The old order was dead, but the new order did not come into being till seventy-five years after the battle of Plassey, *i.e.*, in the age of Lord William Bentinck.

This beneficent revolution in intellect and morals received its start from Rajah Rammohun Roy. It went on gathering force and volume till it created a new literature, a new faith, a new social organization and a new political life—in short, a new civilization in India.

In the intellectual sphere it took two forms; first the acquisition of the new learning and scientific method of the West, and secondly the recovery of the literature, thought and spirit of our ancient forefathers in their true and pure original form. In both of these fields Ishwarchandra Vidyasagar took a leading part. He was not only the first great critical Sanskrit scholar among the modern Bengalis, he was also the founder of vernacular education on sound modern lines and the creator of the first English college conducted entirely by Indians. Great as Vidyasagar admittedly was as a social reformer and philanthropist, he was not less great as an educational pioneer in two very important and untried fields. A study of this aspect of his career from original records is, therefore, a source of instruction to us, who are easefully reaping where he sowed with so much toil and anxiety.

The education of Indian women did not form a recognized part of the Government's duties before 1850, although a beginning in this direction had been made by some respectable Indians (notably Rajah Radhakanta Deb) and the Christian missions. In 1849, a very successful lay school for girls was opened in Calcutta by Drinkwater Bethune—a great well-wisher of the Indians. It was at first named the Hindu Female

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School and afterwards the Bethune Female School. Bethune was fortunate in having Pandit Ishwarchandra Vidyasagar as his co-adjutor and fellow-worker from the beginning. During his Presidentship of the Council of Education he had known the pandit as a highly talented and untiring worker, and so he now induced him to accept the Honorary Secretaryship of his institution (Dec. 1850). Soon after Bethune passed away on the 12th of August 1851. From October 1851, however, Lord Dalhousie had borne all the expenses necessary for keeping the institution going, and on his Lordship's departure in March 1856 it became a recognized Government institution, supported by the State, and was placed by the Lieutenant-Governor under the superintendence of Mr. Cecil Beadon. In his letter, dated 12th August 1856, Mr. Beadon submitted a scheme to the Bengal Government, proposing certain measures as likely to bring the character and objects of the school more prominently to the notice of the higher classes of the Hindu community, and to induce them to educate their daughters in this institution. The appointment of a Committee was also suggested, including among its members Rajah Kalikrishna Deb Bahadur, Rai Harachandra Ghose Bahadur, Babu Ramaprasad Roy and Babu Kashiprasad Ghose. Mr. Beadon was anxious to secure the services of Vidyasagar as Secretary to superintend the affairs of the Bethune School. He remarked in his letter to the Lieut.-Governor :—

> "It may be thought by His Honour no less than justly due to the past services and distinguished position of Pandit Ishwarchandra Sharma to appoint him Secretary to the Committee."[1]

The Bengal Government gave its assent to the proposal. Mr. Beadon was elected President and Vidyasagar Secretary of the Committee.[2]

Like Drinkwater Bethune, Vidyasagar was a staunch advocate of female education as a means of improving the condition of his countrymen. But his zeal and activity were not solely confined to the Bethune Female School.

The Home authorities, in the famous Education Despatch of 1854 and elsewhere, had expressed the intention of giving full and cordial support to female education, and early in 1857 Halliday found himself in a position to take up the problem of the establishment of female schools in Bengal. He sent for Vidyasagar, then the Principal of the Calcutta Sanskrit College and an Assistant Inspector of Schools, South

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[1] Letter from C. Beadon to W. Grey, Secretary to the Government of Bengal, dated 12th August 1856.—*Education Con.* 4 September 1856, No. 166.

[2] Bengal Government to C. Beadon, and to Vidyasagar dated 30th August 1856.—*Ed. Con.* 4 Septr. 1856, Nos. 168 & 170.

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Reconstruction of the inscription.

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Bengal, and had a free discussion with him on the subject. They fully realized the difficulty that was then to be expected in attempting to establish a female school, the chief obstacle being the reluctance with which respectable Hindus could be persuaded to allow their girls to attend a public school. Vidyasagar, however, felt that, by energetic exertion, he would be able to enlist the sympathies of the people in such a good cause.

The Pandit was soon able to report the opening of a girls' school at Jowgong in Bardwan. He made an application for a monthly grant on its behalf, as will be seen from the following letter which he wrote to the Director of Public Instruction on 30th May 1857 :—

"It is with great pleasure I have the honour to report that the inhabitants of Jowgong in Bardwan have at the suggestion of the Head Master of the Model School at that village established a female school there. It was opened on the 15th of April last and now musters on its rolls 28 girls of different ages, ranging from 4 to 11 years, the majority of whom are daughters of respectable Brahmans and Kyasthas of the place. The school is at present located at the dwelling house of Babu Nabagopal Mazumdar the most influential man of the village and opens in the mornings when the Head Master of the Model School, assisted by another, performs the duties of teachers. The establishment of the institution was intimated to me at the commencement, but as I felt doubtful about its stability, I did not think it proper to report the circumstance to you at that time. Having however visited it during this week I have been led to hope that there is every chance of it flourishing within a short time. Not only do the inhabitants take the liveliest interest in its success, but the girls themselves appear to prosecute their studies with great delight and attention. Arrangements for the management of the school are, therefore, urgently required, and I beg to submit them in the accompanying tabular statement for your sanction.

"It will be seen that in the statement I have applied for two pandits as, under present circumstances, I do not think the school can be properly managed with a less number. It is true that the number of girls is only 28 but as each girl has a separate lesson to learn, one man cannot conveniently teach them all. The contingent charges have been estimated at Rs. 5 per month. This sum includes the cost of class-books which it is intended to supply gratis to the pupils, because the inhabitants claim the same privilege in this respect as that allowed in the Bethune School." [1]

Tabular Statement		Rs.
Female School at Jowgong, Zila Bardwan : Head Master	..	25
Asst. Master	..	15
Maidservant	..	2
Contingencies	..	5
	Rs.	47

[1] *Education Con.* 22 Oct. 1857, No. 72.

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However, it seemed to the Director that two masters were unnecessary for the school,—at all events in its first stage—and after a personal conference with the Pandit, he recommended to Government a monthly grant of Rs. 32 for the institution.

Some months before this the Director had submitted to Government three applications of a similar nature, dated 18th March 1857, received from Mr. Pratt, the Inspector of Schools, South Bengal, for grants-in-aid to three female schools, which were proposed to be established at Dwarhatta (thana Haripal) and Gopalnagar (thana Baidyabati) in zila Hughli, and at Narogram in Bardwan.[1] The Lieutenant-Governor sanctioned monthly grants for the support of all the female schools in question, the inhabitants of the villages undertaking in each case to provide a suitable school-building. In sanctioning these grants the Lieutenant-Governor desired to be informed of any other applications for grants-in-aid to female schools which the Director might have received from the Divisional Inspectors "as he would be glad to have them submitted for his favourable consideration."[2]

The attitude of the Bengal Government towards the education of Indian women appeared to the Pandit to be encouraging. He had already put the Model Vernacular Schools for boys into working order, and now directed his attention chiefly to opening female schools. He naturally assumed that his plan—similar to that followed in the case of the Model Vernacular Schools for boys—had generally been approved by Government, and under this impression he opened a number of female schools in the districts under his charge. As usual he reported the opening of the schools to the Director of Public Instruction and applied for monthly grants. That officer, in accordance with previous instructions, sent up the Pandit's applications, along with others, to the Lieutenant-Governor for consideration.[3]

Between November 1857 and May 1858 Vidyasagar established 35 female schools with an average total attendance of 1,300 girls. The following is a list of the villages where these schools were located, the dates on which they were opened, and the monthly expenditure involved in maintaining them[4]:—

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[1] D.P.I. to the Govt. of Bengal, No. 384 dated 1st May 1857; No. 709 dated 9th July 1857.—*Education Cons.* 22nd October, 1857, Nos. 68, 71. For Mr. Pratt's letters, *ibid.*, Nos. 69, 72.

[2] Govt. of Bengal to the Offg. D.P.I., dated 21st October 1857. —*Ed. Con.* 22nd Oct. 1857, No. 74.

[3] Letter from the D.P.I. to the Govt. of Bengal, dated 15th Feby. 1858. For the tabular statement, see *Ed. Con.* 24 June, 1858, No. 167C.

[4] *Education Con.* 5 August 1858, No. 16. See also *Ed. Cons.* 24 June 1858 Nos. 167 A and B, H-I-K-L; *Ed. Con.* 2 Decr. 1858, No. 5.

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Hughli ..	Potbah	..	24 Nov., 1857	.. Rs. 29
	Daspur	..	26 ,, ,,	.. ,, 20
	Boinchi	..	1 Dec. ,,	.. ,, 32
	Digshooi	..	7 ,, ,,	.. ,, 32
	Talandu	..	7 ,, ,,	.. ,, 20
	Hatinah	..	15 ,, ,,	.. ,, 20
	Hoyera	..	15 ,, ,,	.. ,, 20
	Nopara	..	30 Jany. 1858	.. ,, 16
	Udairajpur	..	2 March ,,	.. ,, 25
	Ramjibanpur	..	16 ,, ,,	.. ,, 25
	Akabpur	..	28 ,, ,,	.. ,, 25
	Shiakhala	..	1 April ,,	.. ,, 20
	Mahesh	..	1 ,, ,,	.. ,, 25
	Birsingha	..	1 ,, ,,	.. ,, 20
	Goalsara	..	4 ,, ,,	.. ,, 25
	Dundipur	..	5 ,, ,,	.. ,, 25
	Daypur	..	1 May ,,	.. ,, 25
	Raujapur	..	1 ,, ,,	.. ,, 25
	Malaipur	..	12 ,, ,,	.. ,, 25
	Bishnudaspur	..	15 ,, ,,	.. ,, 20
Bardwan ..	Ranapara	..	1 Dec. 1857	.. ,, 20
	Jambooi	..	25 Jany. 1858	.. ,, 30
	Srikishenpur	..	26 ,, ,,	.. ,, 25
	Rajarampur	..	26 ,, ,,	.. ,, 25
	Jot-Srirampur	..	27 ,, ,,	.. ,, 25
	Dinehat	..	1 March ,,	.. ,, 20
	Kashipur	..	1 ,, ,,	.. ,, 21
	Sanooi	..	15 April ,,	.. ,, 25
	Rasulpur	..	26 ,, ,,	.. ,, 31
	Banteer	..	27 ,, ,,	.. ,, 20
	Belgachi	..	1 May ,,	.. ,, 20
Midnapur ..	Bhangaband	..	1 Jany. ,,	.. ,, 30
	Badanganj	..	10 May ,,	.. ,, 31
	Shantipur	..	15 ,, ,,	.. ,, 20
Nadia ..	Nadia	..	1 ,, ,,	.. ,, 28
				Rs. 845

On 13th April 1858 the Lieutenant-Governor reported to the Supreme Government that he had received some 26 applications from the Director of Public Instruction for grants-in-aid to female schools which it was proposed to establish in the different districts of East and South Bengal, but that he could not sanction them unless the rules for grants-in-aid were to some extent relaxed. He pointed out that the Home authorities, in their despatch of 1st October 1856, had held out hopes that school-fees would not be required in the case of female schools, but he thought that some further encouragement was required. He accordingly proposed that the grant-in-aid rules should be so far modified in favour of female schools, that whenever a suitable school-building was provided, and the attendance of not less than 20 girls was promised, all other expenses for maintaining the school be defrayed by Government.[1]

[1] *Education Con.* 24 June 1858, No. 167 N.

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The Supreme Government, however, replied, on 7th May 1858, refusing to allow the abrogation of the grant-in-aid rules, in favour of female schools, and holding that unless female schools were really and materially supported by voluntary aid, they had better not be established at all.[1]

These orders of the Supreme Government greatly affected Vidyasagar's activities, because, he had, in anticipation of Government's sanction, established quite a number of female schools on the understanding that the inhabitants would provide suitable school-buildings, while their maintenance charges would be defrayed by Government, and it now appeared to him that all his labours had been fruitless and the schools set up by him would have to be closed immediately. Another problem was the payment of the salary to their staff. They had not received their pay from the commencement, and the amount due up to 30th June 1858 was Rs. 3,439-3-3. The following letter, which the Pandit addressed to the Director of Public Instruction on 24th June, explains the situation:—

> "With reference to the orders of the Government of India bearing date the 7th ultimo forwarded with your circular letter No. 1316 dated 29th idem, I have the honour to state that in anticipation of the sanction of Government, female schools were opened by me in several villages in the districts of Hughli, Bardwan, Nadia and Midnapur and the requisite establishment entertained in them. The schools were opened on the condition that the inhabitants of each village would provide a suitable school house, the expenses for their maintenance being defrayed by Government. The Supreme Government, however, have in their orders quoted refused to grant any aid to the schools on the above condition and the institutions must therefore be closed. But it is necessary that the establishment should receive their pay which they have not had since the commencement and which, I trust, Government will be pleased to pass.
>
> 2. It is true that the establishment was entertained by me without orders. But I must be permitted to mention that at the commencement of my operations I was not discouraged either by yourself or Government. If I had been, I would never have ventured to open so many schools nor been placed in my present difficult position. The establishment, having been appointed by me, naturally look up to me for payment, and it will certainly be a great hardship if I am made responsible for it, especially when the expenditure has been incurred on furtherance of an object of public utility."[2]

The Director recommended the Pandit's case to the Bengal Government in the following terms:—

> "I would venture to recommend to the generous consideration of Government the Pandit's petition to be shielded from personal and pecuniary liability on account of the female schools which,

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1 *Education Con.* 24 June 1858, No. 167 O.

2 Letter from Ishwarchandra Sharma, Special Inspector of Schools, South Bengal, to W. Gordon Young, Director of Public Instruction, dated 24th June 1858.—*Education Con.* 5th August 1858, No. 15.

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in anticipation of the sanction and approbation of Government, he was the means of establishing.

2. I would solicit attention to the memorandum annexed to the Pandit's letter, as the Government may perhaps hardly be aware of the extent of this officer's voluntary and unostentatious labours in the cause of female education. If so much can be done in the villages by one individual burdened with other and distant duties, occupying a position of no great authority, and almost without aid or countenance from his superiors, how much might not be done in the same way if the Government were to afford its sanction and support? On the other hand, what discouragement may not be inflicted on the cause if the benevolent exertions of the officer referred to are seen to lead only to his discredit and pecuniary loss."[1]

The Bengal Government in turn placed the whole matter before the Government of India, on 22nd July 1858, with the following remarks:—

> "The Lieutenant-Governor desires earnestly to support the recommendation of the Director of Public Instruction, and His Honour is not without hope that when the Hon'ble the President in Council is made aware of the number of promising female schools which had been actually established by the unostentatious zeal of the very intelligent and meritorious Principal of the Sanskrit College, and which will now, together with the keen and anxious hopes and anticipations to which they have given rise, be suddenly extinguished, he may perhaps be disposed spontaneously to reconsider the orders of the 7th May."[2]

The Supreme Government, before passing orders on the subject, demanded a full explanation of the circumstances under which the Pandit was, or conceived himself to be, encouraged to incur so heavy an expense in establishing the schools in question in anticipation of sanction, and also desired to know who was responsible for the encouragement under which the Pandit had claimed to have acted. As at least one-half of the schools had been established, some of them for several months before the Bengal Government's letter dated 13th April 1858, the Supreme Government enquired whether the circumstance was known to the Lieutenant-Governor at that time and, if so, why it was not then mentioned.[3]

In reply to the inquiry of the Government of India, the Pandit wrote thus to the Director of Public Instruction on 30th September 1858:—

> "I have the honour to state that as some female schools on this footing had already been established with the sanction of the Government, I believed that the plan was generally approved. I invariably reported to your office the establishment of every new school, and usually in the month succeeding that in

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[1] *Education Con.* 5th August 1858, No. 14.
[2] *Ibid.*, No. 17.
[3] *Education Con.* 16th September 1858, No. 1.

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which it was opened. My several applications for the establishments required in these schools were always entertained by you though no orders were ever passed, and during a period of several months I was not in any way discouraged in the course I was taking, which I believed to be in accordance with the wishes of the Government."[1]

The Director forwarded the Pandit's letter to the Bengal Government, supporting his own case with the following observations :

"For my part, knowing or believing that the Pandit had been in personal communication with the Lieutenant-Governor on the subject during my own absence from Calcutta, and inferring from your letter (No. 503) of the 21st October that the Government was prepared to regard his exertions with favour, I did not hesitate to send on his reports to Government (as Mr. Woodrow in my absence had done) without delay, discouragement, or remark.

"I regret to say that the untoward result with which the action of the department in this matter had been attended has given a 'heavy blow and great discouragement' to the cause of female education, from the effects of which, I fear, nothing that is likely to be now done will enable it speedily to recover."[2]

However, the Lieutenant-Governor settled the question more equitably, as his reply to the Government of India (27th Nov. 1858) will show :

3. The Lieutenant-Governor desires to submit the explanation of the Pandit for indulgent consideration, as it appears he has been acting under a misconception. It appears that previous to the application made to the Government of India in my letter of the 13th April last for sanction to grant to 26 female schools recommended by the Pandit and the Director of Public Instruction, which application was not complied with, four grants on similar terms had been sanctioned by the Lieutenant-Governor on the 21st October 1857 under a mistaken view of his authority. This was afterwards overlooked by the Lieutenant-Governor and the irregularly sanctioned grants to these schools continuing uninterrupted, seemed, not unreasonably, to have led the Pandit to suppose that all other such schools would receive grants on similar terms. This must have fully excused him for continuing to recommend grants to schools of a similar kind, but the question still remains why did the Pandit set the schools going and incur expense for their establishments before he had received sanction for them from Government. This question the Pandit has not answered, but he might have submitted a not unreasonable excuse for his irregularity had he stated that the wording of his application always expressed that the schools about which he wrote had been established, and specified the dates on which they had each been opened. And the Director of Public Instruction understood this as requiring retrospective sanction and so entered it in his prescribed tabular statement. But this was

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[1] *Education Con.* 2nd Decr. 1858, No. 4.

[2] Letter from W. Gordon Young, Director of Public Instruction, to the Junior Secy. to the Government of Bengal, dated 4th October 1858.—*Education Con.* 2 Dec. 1858, No. 3.

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undoubtedly overlooked when my letter was written dated 13th April last. There has been evidently a general misconception about these grants. For some time the Lieut.-Governor was under the impression that he could sanction them himself and when he became better informed he found that it was little more than a form to send them up the Supreme Government for sanction, believing that the Supreme Government was certain to approve and sanction them and to applaud all extension of such female schools, especially when established at the desire of the people themselves and partly at their expense. This useful view naturally commended itself to the Lieutenant-Governor's subordinates so that the Pandit thought he could not please the Government better than by encouraging female schools, and the Director of Public Instruction supposed he had only to sanction a recommendation to aid a promising girls' school and it was sure to be sanctioned. The Lieutenant-Governor states all this merely as a fact without attempting to defend or extenuate the error into which he himself, not less than his subordinates, is shown to have fallen. But he trusts it may be viewed indulgently, all the circumstances having been considered."[1]

The biographers of Vidyasagar are responsible for the story which has obtained currency that the Government did not do justice to the Pandit and refused to relieve him of the pecuniary liability which he had incurred by doing Government's work and which he had ultimately to meet out of his own pocket! The Supreme Government's letter, dated 22nd December 1858, conveying its final orders on the subject of the female schools established by Vidyasagar, conclusively proves that the Pandit was paid all his expenses:—

"It is to be regretted that the Pandit's scheme of opening female schools on a plan opposed to the orders of the Hon'ble Court, but in the name of the Government and in anticipation of sanction, should not have been discouraged at once. As it is evident, however, that the Pandit acted in good faith, and with the encouragement and approbation of his superiors, His Honour in Council is pleased under all circumstances, to relieve him from responsibility for the sum of Rs. 3,439-3-3 actually expended on these schools, and to direct that it be paid by the Government.

"With regard to the future the President in Council observes that, so far as can be gathered from these papers, there is no security for the permanent character of any of the schools, and that the only sound material guarantee for their success, namely the voluntary support of the neighbourhood, is wholly wanting. It is not even stated that school houses have been built. Not an argument is brought forward to shake the decision of the Government of India already taken, that the main principle of the grant-in-aid rules shall not be relaxed in favour of these female schools. If keen and anxious hopes really exist, a small monthly payment is no very violent test of them.

"With reference to the above considerations and to paragraph 38 of the Hon'ble Court's despatch, dated the 22nd June last,

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[1] *Education Con.* 2nd December 1858, No. 6.

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> the President in Council must decline to give his sanction to the grant of any public money for the continued support of the female schools opened by Pandit Ishwarchandra, or for the establishment of the Government schools it is proposed to set up in their stead. The correspondence will be forwarded for the consideration of the Rt. Hon'ble the Secretary of State, with a recommendation that a grant not exceeding Rs. 1,000 per mensem may be made for the establishment of female schools in Hughli, Bardwan, and the 24-Parganas, a portion to be expended in assisting such schools as were established by Pandit Ishwarchandra Sharma, and a portion on a few model schools to be supported by the Government." [1]

On a reference from the Government of India (10 January 1859) the Secretary of State for India replied (12 May 1859) that owing to the financial pressure caused by the Mutiny Government was not then in a position to entertain the proposal of making a permanent grant in aid of female schools, but reserved its consideration for a future occasion. [2]

Vidyasagar had retired from Government service in November 1858 and, it is said, that his resignation was due in part to his differences with the Director of Public Instruction on the question of the establishment of female schools. But even the loss of a monthly income of Rs. 500 and the refusal of all financial support by the Government did not make Vidyasagar despair of the future of the institutions he had established. In order to set the girls' schools going, he opened a Female School Fund to which many distinguished Indians (notably Rajah Pratap Chandra Singh of Paikpara) and high Government officials contributed. It will be seen from the following letter which the Pandit wrote to the Hon'ble Sir Bartle Frere on 11th October, 1863 that his efforts generally in the cause of female education were appreciated by his countrymen:—

> "..You will no doubt be glad to hear that the Mofussil Female Schools to the support of which you so kindly contributed, are progressing satisfactorily. Female education has begun to be gradually appreciated by the people of districts contiguous to Calcutta, and schools are being opened from time to time."[3]

Lieutenant-Governor Beadon also encouraged the Pandit by subscribing to the Fund :—

> "I have now the pleasure to enclose a cheque for Rs. 330 on account of Sir Cecil Beadon's subscription to the Female Schools for the half year of 1866. This would have been sent before

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[1] Letter from C. Beadon, Secretary to the Govt. of India to C. T. Buckland, Junior Secy. to the Govt. of Bengal, dated 22nd December 1858.—*Education Con.* 20 Jany. 1859, No. 9.

For the minutes of the members of the Supreme Council, indemnifying the Pandit, see *Education Branch Con.* 24 Dec. 1858, No 5. (Imperial Records.)

[2] *Education Con.* 14 July 1859, No. 27.

[3] Mitra's, *Isvar Chandra Vidyasagar,* p. 173.

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but the cheque book was accidentally left behind." (17 August 1866.)[1]

Vidyasagar's services to the Bethune School.

Vidyasagar was made Honorary Secretary of the Bethune School Committee in August 1856, and a member[2] of the Committee in January 1864. In spite of the numerous demands on his time and attention, he always took a lively interest in the welfare of that institution. We get a glimpse of the condition of the school and the progress made by it during his Secretaryship in the following report (dated 15 Dec. 1862) :—

"Reading, writing, arithmetic, biography, geography, and history of Bengal, with gallery lessons on objects form the course of study. Needle-work and sewing are likewise taught. Instruction is imparted to the pupils through the medium of the vernacular. The tutorial staff consists of a Head Mistress, with two female assistants and two pandits. Besides general superintendence, the Head Mistress teaches needle-work to the first and second classes, and revises the lessons given to them by the pandits. The second mistress teaches needle-work and sewing to the remaining classes, assisted by the third mistress. The third mistress teaches in addition the class consisting of beginners in which the phonetic system is being experimentally introduced. The pandits teach all the books read in the several classes. ....

"As regards the number of admissions, the Committee beg to observe that there has been a steady increase from 1859. The number at present on the rolls is ninety-three. It would have exceeded 100 ere this, if the Committee had not been obliged to reject applications for admission for some time from want of the means of conveyance. The inconvenience has since been removed by the provision of a third carriage, and it is hoped that the anticipated increase will soon take place. It may be as well to mention, with reference to this third conveyance, that, Rajah Pratap Chandra Singh Bahadur presented an omnibus, and that some of the members of the Committee, and a few other native friends of female education, subscribed for a pair of horses. ....

"As regards the proficiency attained by the first class, the Committee regret to observe that, owing to early withdrawals, the majority of the pupils are unable to prosecute their studies up to the desired standard. In cases, however, where girls are admitted at an early age, and permitted to remain at school till the age of eleven or twelve, they attain a fair amount of knowledge in the different subjects taught.

"From the manner in which the number of admissions has recently gone on increasing, the Committee trust that the institution is rising in the estimation of those classes of the community for whose benefit it was originally established. The wealthier classes of native gentlemen do not indeed seem as yet to be

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[1] Mitra's, *Isvar Chandra Vidyasagar*, p. 173.

[2] S. C. Bayley, Junior Secy. to the Govt. of Bengal, to Pandit Ishwarchandra Sharma, dated 19th Jany. 1864.—*Ed. Con.* Jany. 1864, No. B. 160.

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availing themselves directly of the advantages offered by the school; a very few admissions have as yet been made from those classes. The Committee, however, are happy to believe that home education for females is being resorted to in many families amongst the wealthier classes; and this result, they believe, is in a considerable degree owing to the beneficial influence of the Bethune School.

"If a large number of conveyances were at the disposal of the Committee, the school might be made more extensively useful. It will be understood, however, that if the number of children should exceed a certain limit, increased resources will then be required in order to supply an extra staff of instructors, etc. ...."[1]

Miss Mary Carpenter's name is well known in this country as a philanthropic worker and friend of the Indian people. She paid a visit to Calcutta during the latter part of 1866. She wished very much to promote female education in India, and on her arrival in Calcutta sought to make the acquaintance of Vidyasagar who was well known as a champion of the cause of female education. Mr. Atkinson, the Director of Public Instruction, wrote a letter to the Pandit on 27th November 1866 making an appointment with him to meet Miss Carpenter at the Bethune School.

She visited some of the female schools in the vicinity of Calcutta, accompanied most of the time by Vidyasagar, with whom she had contracted a sincere friendship at her first meeting. In December 1866 she visited the Uttarpara Girls' School along with Vidyasagar, the D.P.I., and Mr. Woodrow—an Inspector of Schools. On the return journey the Pandit met with a serious accident—his buggy (dog-cart) capsizing and causing severe injuries to his liver. In consequence of this accident his health was greatly impaired, and it paved the way for the fatal malady which brought about his death in July 1891. But Vidyasagar paid no heed to the decay of his health and, like a true patriot, continued to work hard for the good of his country.

Miss Carpenter moved the Government to undertake the establishment of a Normal School for the training of native female teachers to be accommodated temporarily in the premises of the Bethune School. On 1st September 1867 Sir William Grey, the Lieutenant-Governor of Bengal, asked for Vidyasagar's views on the proposal. The Pandit, however, was opposed to the measure and he gave the following reply :—

"Since we met last, I have made careful enquiries and have thought over the subject, but I regret to say that, I see no reason to alter my opinion as regards the difficulty of practically carrying out Miss Carpenter's scheme of rearing a body

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[1] From Pandit Ishwarchandra Sharma, Hony. Secretary, Bethune School Committee, to the Hon'ble A. Eden, Offg. Secy. to the Govt. of Bengal, dated the 15th Decr. 1862.—*Education Con.* Decr. 1862, Nos. A. 59–62.

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of native female teachers either in connection with the Bethune School or independently, such as may be acceptable to the bulk of the Hindu community and worthy of their confidence. Indeed, the more I think about it the more am I convinced that I cannot conscientiously advise the Government to take the direct responsibility of setting in motion a project which, in the present state of the native society and native feeling, I feel satisfied, will be attended with failure. You can easily conceive whether respectable Hindus will allow their grown-up female relatives to follow the profession of tuition and necessarily break through the present seclusion, when they do not permit the young girls of ten or eleven years to quit the zenana after they are married. The only persons, whose services may be available, are unprotected and helpless widows, and apart from the consideration whether morally they will be fit agents for educational purposes, I have no hesitation in saying that the very fact of their dispensing with the zenana seclusion and offering themselves as public teachers will lay them open to suspicion and distrust and thus neutralize the beneficial action aimed at.

"I think the Government cannot pursue a better course on this subject than what has been indicated in the India Government's letter lately published in the papers. The best test of popular feeling will be the application of the grant-in-aid principle. If the people are willing to carry out Miss Carpenter's idea, they should be assisted with liberal grants by Government. Although the great bulk of the Hindu community, so far as I can perceive, will not avail themselves of such assistance, still there are particular individuals who seem to be very sanguine on this subject and if they are sincere and earnest they will, at any rate, it may be hoped, come forward and with Government aid, begin the experiment.

"I am free to confess that I do not place much reliance in them; but they will have no right to complain under the rules announced by the Government of India.

"I need hardly assure you that I fully appreciate the importance and desirableness of having female teachers for female learners; but if the social prejudice of my countrymen did not offer an insuperable bar, I would have been the first to second the proposition and lend my hearty co-operation towards its furtherance. But when I see that success is by no means certain and that the Government is likely to place itself in a false and disagreeable position, I cannot persuade myself to support the experiment.

"As regards the Bethune School, I entirely go with you that the results are not proportionate to the amount expended upon it, but at the same time I cannot recommend its abolition altogether. As a memento of the services to the cause of female enlightenment in India of the great philanthropist whose name the Institution bears, it has, I submit, a claim to the support of Government. In the next place, it is very desirable that there should be a well-organized female school in the heart of the metropolis, to serve as a model to sister institutions in the interior. The moral influence of the present institution in native society has been undoubtedly great. It has, in fact, paved the way to female education in surrounding districts and this, in my humble opinion, is no mean return for the large sums which have been annually expended upon it. But I must say that there is great room for economy and improvement. The expenses, I think, can be reduced to nearly half the present amount without detriment to the efficiency of the institution.

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> "I intend to go to the North-Western Provinces shortly for prolonged change for the benefit of my health and if you wish to know my views on the re-organization of the Bethune School, I shall be happy to await your return to Calcutta and confer with you on the subject." (1st Oct. 1867.)

The Lieutenant-Governor acknowledged receipt of the Pandit's letter on 14th October, 1867 in the following terms :—

> "I am greatly obliged to you for your letter of the 1st instant ; it is both useful and interesting. I hope you will not, on any account, postpone your visit to the N.-W. Provinces, and I trust that you will obtain a revival of health from the change.
>
> "Should I find you in Calcutta however a few days hence, I shall be most happy to see you and to hear your views as to the re-organization of the Bethune School. Otherwise you can perhaps find leisure to write to me on the subject from the N. West.
>
> "If you should desire to have letters of introduction to any of the Government officers in the N.-W. Provinces, I shall be glad to assist you in that way. I shall be at Belvedere from the 18th inclusive."

The Government of Bengal, however, favoured Miss Carpenter's scheme, and an opportunity for giving it a trial soon arose.

Some time about the middle of 1867 the Bethune School Committee were led to believe, from the falling off in the number of pupils, as well as from other circumstances, that the condition of the school required a searching enquiry and, accordingly, at a special meeting held for the purpose in July 1867, a Sub-Committee, consisting of Ishwarchandra Vidyasagar, Kumar Harendra Krishna Deb and Prasanna Kumar Sarvadhikari, was appointed. The Sub-Committee met, enquired fully into the subjects, and submitted their report on 24th September, 1867. This report disclosed the fact that gallery teaching had been neglected, the children were not well taught, the promotions were not properly made, and that the distribution of the teaching agency had not been very judicious. The Bethune School Committee maintained that the school would not flourish or recover its position as long as Miss Pigott was at its head.[1]

In its letter dated 3rd March, 1868 the Bengal Government, while concurring with the desirability of an early termination of the service of the Head Mistress, wrote to the Committee of the school as follows:—

> "I am to request at the same time that the Committee will be so good as not to proceed to the engagement of another Mistress without communicating with the Lieutenant-Governor. His Honour is disposed to think that the opportunity should be taken to render the building bequeathed by the late Mr. Bethune and the large annual grant from the general revenues which is now connected with it more useful in the promotion of female education

[1] *Education Con.* March 1868, No. A. 8.

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than he believes it to be under present arrangements, and this end, the Lieutenant-Governor is led to believe, may be materially served by combining with a Female School on a more moderate scale than the present one, a Normal School for female teachers.

"If it is determined to utilize the Bethune School building, and the funds connected with that building for such a purpose, it will be desirable to bring the whole institution into more close and direct connection with the Education Department than it is at present. The Lieutenant-Governor will be glad to know if in this event the Committee of native gentlemen who have hitherto, with an English President, conducted the affairs of the Bethune School, would be willing to act as a Consultative Committee in co-operation with the Divisional Inspector of Schools."[1]

The Committee refused to take part in the management of the institution in future if they were placed on the footing suggested, and their Hony. Secretary, Pandit Ishwarchandra Vidyasagar gave the following reply to the Bengal Government on 13th June, 1868:—

"As regards the establishment of a Female Normal School, the Committee, in their letter to the Director of Public Instruction,[2] have stated at length their views, and they desire me to forward a copy of the same for His Honour's information.

"The members of the Committee, I am desired to state, regret much their inability to act in the proposed Consultative Committee under the Divisional Inspector of Schools for the management of the Normal School."[3]

The Lieutenant-Governor, before passing final orders in this important matter, desired the D.P.I. for a full expression of his opinion after consulting Mr. Woodrow, the Inspector of Schools, Central Division.[4]

The D.P.I. held that both economy and efficiency would be best ensured by combining the Normal School and the Bethune School in one institution under a single Superintendent, subject to the direct control of the Education Department.[5]

The Lieutenant-Governor approved the scheme proposed by the Director.[6] One Mrs. Brietzche was, on 27th January 1869,

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[1] *Education Con.* March 1868, No. A. 9.

[2] This is a lengthy letter which W. S. Seton-Karr (the President of the Bethune School Committee) addressed to the D.P.I. on 18th Feby., 1867, negativing the proposals of Mary Carpenter for the establishment of a Female Normal School in Calcutta, contained in the D.P.I.'s letter to the Bethune School Committee, dated 16 Feby., 1867.—See *Ed. Con.* July 1868, No. A. 69.

[3] *Education Con.* July 1868, Nos. A. 68–70; *Supplement to the Calcutta Gazette*, dated 3rd Feby., 1869.

[4] Bengal Govt. to D.P.I. dated 20 July, 1868.—*Ed. Con.* July 1868, Nos. A. 68–70.

[5] D.P.I. to Bengal Govt. dated 28 Dec., 1868.—*Ed. Con.* March 1871, Nos. B. 43–56.

[6] Bengal Govt. to the D.P.I., dated 25th January, 1869.—*Ed. Con.* March 1871, Nos. B. 43–56.

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appointed Lady Superintendent of the Bethune and Normal Schools for three years on a salary of Rs. 300 per month. The Bethune School Committee was dissolved, and the D.P.I. conveyed thanks to the members of the Committee—specially to Vidyasagar, their able Secretary—for their past services.

Vidyasagar, although not very hopeful of the success of the new arrangement, gave the authorities every possible assistance whenever asked, as will be seen from Mr. Woodrow's letter to the D.P.I., dated 2nd March, 1869 :—

> "I have the honour to report that Pandit Ishwarchandra Vidyasagar made over to me the documents relating to the Bethune School on the 23rd instant [February]. He also spent a long time in going with me over the school and its grounds and discussing the means necessary to make it suitable for the residence of Hindu ladies.
>
> "He kindly offered to give me every assistance in his power in the establishment of the Normal School though he entertains but slight hopes of its success while placed in Calcutta."[1]

But the Pandit proved a true prophet and, before some three years were over, Sir George Campbell, the next Lieutenant-Governor, ordered the Female Normal School—attached to the Bethune School—to be closed after 31st January, 1872, as he was satisfied that if an undertaking of this nature was to succeed in the existing state of Indian society, it must be started and managed by the people of the country according to their feelings and fashions.[2] The order for the immediate abolition of the Normal School was conveyed to the D.P.I. in the following letter :—

> "On a general review of the whole subject, it is clear that after a three years' experiment the Female Normal School has unquestionably failed.....The Lieutenant-Governor is himself too inclined to think that there is much in the view taken by the ladies most experienced in these matters, *viz.*, that it may be very dangerous to give women education and a certain freedom of action without the sanction of *some* religion. ....
>
> "The Female Normal School will, therefore, be closed after the 31st January, 1872."[3]

It will be seen from the foregoing what ardent interest Pandit Ishwarchandra continued to take throughout his life in the cause of female education in Bengal. After his demise

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[1] H. Woodrow, Inspector of Schools, Central Dvn. to the D.P.I., dated 2 March, 1869., *Ibid.*

[2] "A rival school [was] opened by Babu Keshav Chandra Sen with funds supplied by Miss Carpenter, but in direct opposition to her wishes....Babu Keshav Chandra Sen is now about to close his school on the strong remonstrances of Miss Carpenter, who has refused to allow the funds supplied by her to be spent on its support."—D.P.I. to Bengal Govt., dated 27th Dec., 1871.—*Ed. Con.* Jany. 1872, Nos. A. 30-36.

[3] The Under-Secy., Govt. of Bengal to the D.P.I., dated 24th Jany., 1872.—*Education Con.* Jany. 1872, Nos. A. 30-36. See also *Ed. Con.* April 1872, Nos. A. 54-58.

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in July 1891, a body of Hindu ladies perpetuated the great Pandit's memory in the following manner :—

> "The Committee beg to announce that they have recently received the sum of Rs. 1,670 from the Secretary to the Ladies' Vidyasagar Memorial Committee in Calcutta, for the establishment of an annual scholarship tenable for two years to be awarded to a Hindu girl who after passing the annual examination in the third class of the school, desires to prepare herself for the University Entrance Examination. The late Pandit Ishwarchandra Vidyasagar was the co-adjutor and fellow-worker of Mr. Bethune, when the school was founded, and since then continued, so long as he lived, to take the keenest interest in its welfare. It is, therefore, a source of great gratification to the Committee to find that a body of Hindu ladies in Calcutta should have interested themselves in this manner to perpetuate the memory of the late Pandit Vidyasagar who, during his lifetime, in addition to the philanthropic work to which he devoted his whole life, had done so much to promote Female Education in Bengal."[1]

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[1] In the presence of H.E. the Viceroy and Governor-General of India—Lord Elgin, and many other notable European and Indian gentlemen—Bethune College—5th March, 1894. Annual Report.

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On the Dates of Publication of The Fishes of India by Dr. Francis Day.

By B. Prashad.

(*Published by permission of the Director, Zoological Survey of India, Calcutta.*)

The Fishes of India by Dr. Francis Day is a fairly complete illustrated account of the fishes of the Indian Empire including Burma and Ceylon, and, though published in the eighties of the last century, is the most standard work of reference on the subject even to-day. The main work was published in four parts between 1875–1878, and a Supplement with its pages in continuation of those of the main volume was issued later in 1888. Practically no information has so far been available regarding the exact dates of publication of the various parts, and the information published in the *Zoological Record* is inaccurate in several respects. Many new species were described and illustrated in the *Fishes of India* for the first time, and to settle the questions of priority in connection with nomenclature of these forms it is desirable that accurate information on the dates of publication of the various parts should be available. In Dean and Eastman's work on the Bibliography of Fishes[1] there is no information about the various parts either with reference to the text or the plates and the date of publication of the whole work is given as 1875–1878, while the Supplement issued in 1788 is listed separately. Similarly no information is available in the Library Catalogue of the Books, etc., in the British Museum, Natural History, London,[2] which is a mine of information on such questions. *Fishes of India* is catalogued as a quarto publication issued in London (1875–) 88 consisting of pp. xx, 778 (–816); the pages in brackets being those of the Supplement which was issued ten years after the main work. In the introduction of the first volume on the *Fishes*[3] in the *Fauna of British India* Series the then Editor Dr. W. T. Blanford wrongly gives the dates of issue of the *Fishes of India* as 1876–78. Dr. B. L.

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[1] Dean, B. and C. R. Eastman—*A Bibliography of Fishes*, Vol. I, p. 304 (New York, 1916).

[2] Woodward, B. B.—*Cat. Books, Manuscripts, etc., in the Brit. Mus. (Nat. Hist.)* Vol. I, p. 430 (London, 1903).

[3] Day, F.—*Fishes* in *Faun. Brit. Ind.* Vol. I, Introduction, p. iii (London, 1888).

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Chaudhuri[1] in his valuable paper on the Bibliography of Indian Fishes gives the dates of the work as 1875–78 and does not mention the Supplement, which, as we noted above, was published in 1888.

In most of the copies of the whole work, which I have seen, all the parts are bound together and the title pages of the several parts are not preserved. A further difficulty in this connection arises from the fact that apparently two distinct issues of the work were issued; this does not seem to be indicated anywhere. In the first issue the work, excluding the Supplement, was published in four separate parts, while in the second issue the idea of dividing the text and plates into two volumes appears to have been adopted. In this issue the only difference about the text apparently was to print an additional title page with the words "Vol. I" on it, the words "End of Vol. I" about the middle of page 320 of the text and the issue of an Alphabetical Index for this volume (pp. i–xii); these additional pages were evidently, as appears from the title page of this issue, printed in 1876. The second volume of this issue has on the title page "Vol. II, Atlas—Containing 198[2] plates" and contains the Preface, the Introduction and Systematic Index (pp. i–xx) and the General Alphabetical Index at the end (pp. 749–778). The date of issue of this volume was 1878.

In a volume consisting of the first two parts of the work only belonging to the late H. Milne-Edwards of Paris and now in my possession, the title pages of the parts are fortunately preserved and the two parts are bound apparently as they were received from the publishers. Of the third part also I have before me a copy of the plates only (lxxix–cxxxiii) in boards with a printed title page and the following additional information:—On the left hand top corner is printed "Part III," while on the right hand top corner in two lines "In Four parts. Subscription price for the whole work £12 12 s" and the date at the bottom of the page "August 1877." In another copy I found a pencil note giving the date of issue of the first part as August 1875.

There is a curious inaccuracy in the information about the introduction in the *Zoological Record* for 1878 (Vol. XV, p. 5 Pisces) where the Recorder—A. W. E. O'Shaughnessy—states that "The work is preceded by an introduction occupying nine pages" and does not mention the Preface. Similarly in Vol. XII, of the *Zoological Record* the same author does not include pl. xl, which was issued with the first part; he also

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[1] Chauduri, B. L.—*Journ. Asiat. Soc. Bengal*, Vol. XIX, p. cxlix, (1918).

[2] This is apparently a misprint, for the number of plates issued with the work in all the copies I have seen, is 195 and not 198.

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makes no mention of it in the information about the subsequent parts.

It is of interest to note that the Supplement of this work which, as noted already, was issued 10 years after the publication of the main work, is very rare, and is missing in most copies in India. Though consisting only of 38 pages with 7 text-figures, second-hand copies of it fetch as much as £1.

The results of my collation of the dates of this work are as follows:—

Part, I. pp. 1–168, pls. i–xl (1875, probably August).
Part, II. pp. 169–368, pls. xli–lxxviii (1876).
Part, III. pp. 369–552, pls. lxxix–cxxxiii (1877).
Part, IV. pp. i–xx consisting of Preface, Introduction and Systematic Index, and text pp. 553–778, pls. cxxxiv–cxcv (December 1878).
Supplement pp. 779–816 with 7 text-figures (1888).

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Precession and Libration of the Equinoxes in Hindu Astronomy.

By Sukumar Ranjan Das.

The observation of the Sun's motion with reference to the signs of the Zodiac must have very early led to the discovery of the phenomenon, namely, at succeeding equinoxes the sun does not come to the same stars, but that the signs and the stars are observed to have a motion relative to the point, which the sun occupies at either equinox and that the direction of motion is opposite to the sun's observed annual motion among the stars. In 134 B.C. Hipparchus in Greece discovered this fact on observing a star which was new to him, but the precession was apparently long known to Hindu astronomers, and its rate determined by them roughly to a near approximation.

Now it was a very remarkable achievement for the ancient astronomers; for the discovery of precession was essential to the progress of accurate observational astronomy. Hence we like to put in here a few words to explain the phenomenon following the method of synthesis as far as practicable. We know that the path of the sun in the celestial vault is accurately a circle and it follows that its orbit must be a closed plane curve. An observation of the stars which may be regarded as fixed to the celestial vault and in space, leads to the conclusion that this plane is fixed in space. The line perpendicular to this plane through the centre of the celestial vault is, therefore, fixed in direction in space and precession consists in the rotation of the earth's axis about this line in a period of 26,000 years. The point at which the polar axis meets the celestial vault thus describes a small circle in space as a necessary consequence, the stars that occupy the region marked by this circle become pole stars in succession. While this goes on, the line of intersection of equator and ecliptic (which passes through the sun at an equinox) points to different stars at different epochs.

There is no mention of precession in the Jyotiṣa Vedānga which was probably composed in the 12th century B.C. Nor is it dealt with in the Brāhma Sphuta Siddhānta of Brahmagupta and the Śiṣyadhīvṛddhida of Lalla. It is not also found in the original text of Sūrya Siddhānta, though found in the present form of Sūrya Siddhānta, as there is no mention of this phenomenon in the text of Sūrya Siddhānta included in Varāhamihira's Pañcha Siddhāntikā.[1] Of the Siddhāntas,

[1] Vide page 326, Bhāratīya Jyotih Śāstra by S B. Dikshit.

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now extant, the Soma, the Brahma, the Saura and the Vaśiṣtha of the first or inspired period deal with this doctrine. It has also been mentioned by Āryabhata II (950 A.D.), Muñjāla and Bhāskara of the second period. Hence it is evident that precession was known from the time of the Saṃhitās, as Brahma Siddhānta forms a part of the Sākalya Saṃhitā,[1] the principal parts of which were probably written about a century later than the Jyotiṣa Vedānga. (Vide page 62, Prof. J. C. Roy's "Our Astronomy and Astronomers".)

(1) In the Soma Siddhānta we get the following rule for finding out the precession[2] :—

In one mahāyuga the circle of asterisms librates 600 times. Multiply this figure by the number of days elapsed since the beginning of creation and divide the product by the number of days in one yuga. The result will be the total distance in arc moved owing to precession by the star which was taken as the initial point of starting, since the beginning of creation. The arc after deduction of the complete revolutions will give the amount of longitude of the ayanagraha[3] (the initial star). This multiplied by 200 and divided by 600 will give the amount of precession of the first point of Aries on a particular day. If the ayanagraha be within the six signs beginning from Libra (Sanskrit तुला), the amount of precession will be added to and if within the six signs beginning from Aries (Sanskrit मेष), it will be subtracted from the ayanagraha for correction ; and this is required to find the position of the equinox.[4]

For example, to find the precession on the 1st of Vaiśākha in 1844 Saka or 1922 A.D.

Find the number of days which have elapsed since the creation.

Number of years elapsed since creation to the beginning of Kaliyuga is 1969920000.

Number of years from the beginning of Kaliyuga to the beginning of Saka era is 3179.

Hence the number of days elapsed since creation up to the 1st Vaiśākha 1844 Saka is (1969920000+3179+1844)× number of days in one year.

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[1] Some are of opinion that portions of the Sākalya Saṃhitā are written at a later date. But I believe that the portions in which the precession appears are of a considerable early date. For, we know that Brahmagupta refers to Viṣṇuchandra's theory of precession and refutes it. It is believed that Viṣṇuchandra got the clue from earlier writers. However, this is a disputed point.

[2] Soma Siddhānta, Spaṣṭādhikāra, verses 31 and 32.

[3] A planet's longitude as corrected for ecliptic deviation. Monier William's Dictionary.

[4] Vide an article on "Precession" by Dr. Ekendra Nath Ghosh published in Bangīya Sāhitya Pariṣat Patrikā.

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Total distance in arc travelled by the ayanagraha is $\frac{600 \times 1969925023 \times \text{No. of days in one year}}{4320000 \times \text{No. of days in one year}} = 273600\ \frac{5023}{7200}$ *i.e.* 273600 complete revolutions $+ \frac{5023}{7200}$ of a revolution $=$ 273600 complete revolutions $+ 251° 9'$.

Hence deducting the complete revolutions, the length of arc is $251° 9'$.

Therefore, the longitude of the ayanagraha is $251° 9' - 180° = 71° 9'$. Therefore precession $= \frac{71° 9' \times 200}{600} = 23° 43'$.

According to the Soma Siddhānta the first point of Aries moves 30° on both sides of the Nirayana bindu, the fixed initial point, so that in the time when the ayanagraha makes one complete revolution, *i.e.*, moves through 360°, the first point of Aries (Krāntipāta bindu) moves through $30 \times 4 = 120°$.

Hence to find the precession we multiply the longitude of the ayanagraha by $\frac{120}{360}$ or $\frac{1}{3}$ or $\frac{200}{600}$.

(2) Next we come to the Brahma Siddhānta. This work is different from Brāhma Sphuta Siddhānta. The problem of precession was treated at a considerable length in this work. In discussing the theory of libration, it says that the circle of asterisms librates 600 times in one Mahāyuga[1] and lays down a rule to find out the precession which is the distance between the position of the first point of Aries at any time and the initial point of starting. The process is a bit different from that of the Soma Siddhānta. We find the total distance in arc moved by the ayanagraha and thence its longitude, then multiply this by $\frac{3}{10}$ instead of $\frac{200}{600}$ or $\frac{1}{3}$. For example, if you want to find the precession on the 1st of Vaiśākha, 1844 Saka, by this method, we get as before the longitude of the ayanagraha to be $71° 9'$. The precession is $\frac{3}{10}$ of $71° 9' = 21° 20' 42''$.

(3) Next we come to the Sūrya Siddhānta.[2] It says, that the circle of asterisms librates 600 times in a great yuga, that is to say, all the asterisms, at first, move westward 27°, then returning from that limit they reach their former places, then from those places they move eastward the same number of degrees, and returning thence come again to their own

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[1] Brahma Siddhānta of the Sākalya Saṃhitā, Chap. II, verses 184–194.

[2] Sūrya Siddhānta, chap. III, verses 9,10.

Pandit Bāpudev Sastri says that this portion of Sūrya Siddhānta is of later origin, as it does not occur in the original text included in the Pañcha Siddhāntikā of Varāhamihira.

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places ; thus they complete one libration or revolution, as it is called. In this way the number of revolutions in a Yuga is 600 which answers to 600,000 in a Kalpa.

Multiplying the Ahargaṇa (or the number of elapsed days) by the said revolutions and dividing by the number of terrestrial days in a Kalpa, we get the quotient as the elapsed revolutions, signs, degrees, etc.

Rejecting the revolutions, find the *bhuja* of the rest (i.e., signs, degrees, etc., as mentioned in verse 30 of the second chapter). The *bhuja*, just found multiplied by 3 and divided by 10, gives the degrees, etc., called the Ayana.

For example, we find the precession on the 1st of Vaiśākha, 1844 Saka, thus :—

The number of elapsed days is 1969925023 × No. of days in one year.

The distance in arc travelled by the Ayanagraha

$$= \frac{1969925023 \times 365 \times 600}{4320000 \times 365} = 273600 \text{ complete revolutions} + 251°9'.$$

Hence, the longitude is $251°9' - 180° = 71°\ 9'$.

The precession is $\frac{3}{10}$ of $71°\ 9' = 21°\ 20'\ 42''$.

(4) In the Vaśiṣtha Siddhānta the method of finding out the precession is this[1] :—Multiply by 27 the remainder of the division of the number of years elapsed since creation by 1800 and divide the product by 1800. When the amount of precession is greater than 27°, the position of the equinox is found by subtracting the amount from 54° ; if greater than 54° then subtract from 81°. In one yuga or 4320000 years the circle of asterisms librates 600 times. Therefore, in $\frac{4320000}{600}$ or 7200 years the circle librates once. In this time the first point of Aries moves 27×4 or 108° eastward and westward. It moves 27° in $\frac{7200}{4}$ or 1800 years. For example, to find the precession on the 1st of Vaiśākha, 1844 Saka, we get as before the number of years elapsed since creation = 1969925023.

The remainder of 1969925023 ÷ 1800 is 1423.

$$\text{Therefore, precession} = \frac{1423 \times 27}{1800} \text{ or } 21°\ 20'\ 42''.$$

(5) In the Vṛddha Vaśiṣtha Siddhānta, the process is only referred to in passing.[2] Divide the number of years elapsed since creation by 7200, and then find out the longitude in degrees, etc. Multiply the longitude by $\frac{3}{10}$. For example, to

1 Vaśiṣtha Siddhānta, Madhyamādhikāra, verses 36-38; also Spaṣṭādhikāra, verse 55.

2 Vṛddha Vaśiṣtha Siddhānta, chap. II, verse 35.

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find out the precession on the 1st of Vaiśākha, 1844 Saka, we get, $\frac{1969925023}{7200}$ (is the same as $\frac{1969925023 \times 600}{4320000}$ of the Sūrya Siddhānta or Brahma Siddhānta)=273600 revolutions + 251° 9′.

The longitude is 251° 9′ − 180°=71° 9′.

Hence, the precession is $\frac{3}{10}$ of 71° 9′=21° 20′ 42″.

The principle followed by Brahma Siddhānta is the same as that followed by Saura Siddhānta, Vaśiṣtha Siddhānta and Vṛddha Vaśiṣtha Siddhānta. They say that the first point of Aries moves 27°×4 or 108° when the Ayanagraha makes one complete revolution, *i.e.*, the first point of Aries moves 27° when the Ayanagraha moves 90°. Hence the multiplier is $\frac{27}{90}$ or $\frac{3}{10}$.

(6) Next we come to Munjāla. Munjāla in his Laghu Mānasa (854 Saka or 932 A.D.) says that there are 199669 revolutions in a Kalpa. At the time of Munjāla the precession was one minute and the Saka year of 449 was of zero precession. He states that the annual precession=59·9007 seconds of arc.[1]

(7) Next we come to the Mahāsiddhānta of Āryabhata II (875 Saka). There we find the mention of different kinds of motion. Mention is first made of the revolution of the Saptarṣi asterism (Saptarṣīṇām Kuṇidhudhidhudhijā) in the 11th verse of Madhyamādhikāra, *i.e.*, the Saptarṣi asterism makes 1599998 revolutions. Next is mentioned the revolution of the Ayanagraha which is 578159 times in one yuga (masihatamudhāḥ ayanagrahasya). Then is found the precession in the 13th verse of the Spaṣṭādhikāra. Find the longitude of the Ayanagraha from the revolution of the Ayanagraha, hence find the declination. The arc thus found gives the precession. In the opinion of Āryabhata II the precessional motion is 24°×4=96° when the ayanagraha makes a complete revolution or moves 360°. Hence, the annual precession is thus found. The Ayanagraha moves in one year

$$\frac{578159 \times 1296000''}{4320000000} \text{ (where } 360°=1296000'')=173{\cdot}4477''.$$

[Here 4320000000 is the number of years is one yuga.]

$$\text{Hence the annual precession} = \frac{173{\cdot}4477'' \times 96}{360} = 46{\cdot}2527''.$$

The procedure laid down in the Mahāsiddhānta is entirely different from that in the other Siddhāntas. It is mainly that Āryabhata II deduces the precession from the declination of the solstitial point whose movement about the initial point he takes

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[1] Vide Bhāratīya Jyotiḥ śāstra by S. B. Dikshit, page 313 and page 330.

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into account instead of the movement of the first point of Aries, and that the movement is 24° eastward and 24° westward. This, of course, brings the amount nearer to that found in modern astronomy which is 24° 30′.[1]

(8) Lastly, let us come to the discussion on precession in the Siddhānta Śiromani of Bhāskara where he lays down the following:—

The point of intersection of the equinoctial and ecliptic circles is the Krāntipāta or intersecting point for declination. The retrograde revolutions of that point in a Kalpa amount to 30,000 according to the author of Sūrya Siddhānta. The motion of the solstitial points spoken of by Munjāla and others is the same as this motion of the equinox; according to these authors its revolutions are 199669 in a Kalpa.[2]

The precession found by Munjāla and Bhāskara is different from that found in Sūrya Siddhānta and other works. Bhāskara has done very little justice to this matter. Burgess and Whitney have rightly remarked, "Now it is not a little difficult to suppose that a phenomenon of so much consequence as this, which enters as an element into so many astronomical processes should have been hidden away thus in a pair of verses."

It is curious why Bhāskara has made the mistake of putting 30,000 for half of a revolution, or for the retrograde motion of the libration instead of 300,000. There must, therefore, have been some mistakes in the transcript.

Bhāskara supposes the equinoctial point to be in motion, whereas the Sūrya Siddhānta assumes that the entire circle of asterisms oscillates, first 27° on one side of a mean point and then 27° on the other side of that point. This supposed motion of the whole of the constellations might have led Bentley to assume that the ancient Hindu astronomers had two systems of Lunar asterisms, the one fixed and the other moveable, the latter of which he called the Tropical Sphere, which was at one time in coincidence with the Sidereal Sphere, and from this it has been separating at a rate equal to the annual precession.[3]

Now we shall refer to the discussion on the two theories—one of complete revolution through the whole of the asterisms and the other of oscillation of the equinoxes.[4] Munjāla, the author of Vaśiṣṭha Siddhānta, Prithūdaka and several others maintain that there is a complete revolution through the whole of the asterisms, while Sūrya Siddhānta and the other four Siddhāntas state that there is oscillation of the equinoxes

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1 Vide a paper on "Precession" by Dr. Ekendra Nath Ghosh, M.D., in the Bangīya Sāhitya Pariṣat Patrikā.

2 Siddhānta Śiromaṇi, chap. VI, verses 17 and 18.

3 Brennand's Hindu Astronomy, page 78.

4 Bhāratīya Jyotiḥ Śāstra, page 332.

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eastward and westward. Thus Revatī is supposed to librate 27 degrees to the east and then 27 degrees to the west according to the Sūrya Siddhānta, but 24 degrees to the east and 24 degrees to the west according to the Mahāsiddhānta of Āryabhata II. We have already said that in 445 Saka or 523 A.D. the amount of precession was supposed to be zero and the annual precession was about 60″. According to the Āryasiddhānta of Āryabhata II, the amount of precession would be 24° in Saka 1885 or 1963 A.D., and according to the Sūrya Siddhānta the amount of precession would be 27° in Saka 2221 or 2299 A.D. Here it may be noted that the theory at present recognised by modern European astronomers is both of oscillation and continuous motion either forward or backward; whereas the generally recognised theory of the Hindu astronomers is of oscillation only.

The Hindu astronomical works state that the first point of Aries (Meṣa krānti bindu) moves along the Ecliptic (krānti vṛtta) twenty-seven degrees on each side of the Nirayana bindu, the fixed initial point; that is to say, in a certain number of years it goes twenty-seven degrees away from the Nirayana bindu, then returns to it, again goes twenty-seven degrees the other side and comes back to the Nirayana bindu in a certain number of years.[1] This was the doctrine of a libration of the Equinoctial and Solstitial points. Colebrooke, in his essay on the equinoxes, has given the views of a number of writers on the subject, by some the motion is considered to be an entire revolution, through the whole of the asterisms; by others, and those the most numerous, it was a libration between certain limits on each side of a fixed point; by a few amongst whom was the celebrated astronomer, Brahmagupta, who (though he was aware of the fact that the southern solstice had been formerly in the middle of Aśleṣā, and the northern in the beginning of Dhaniṣṭhā) had doubts regarding the motion. He remarks upon the passage in the text, relating to their former position, "this only proves a shifting of the solstices, nor numerous revolutions of them through the Ecliptic." Brahmagupta attributes the cause of the seasons to the Sun's motion only and not to the precessional motion of the equinoxes.[2] He quotes the view of Viṣṇuchandra supporting the precessional motion and refutes it. But Prithūdakasvāmi, Brahmagupta's commentator, supports Viṣṇuchandra's view and refutes Brahmagupta.[3]

This theory of libration has been refuted by modern European astronomers. But Tilak says in his Orion,[4] "This

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[1] Brennand, Hindu Astronomy, page 77.
[2] Brāhma Sphuta Siddhānta, chapter II, verse 54.
[3] Vide page 329, Bhāratīya Jyotiḥ Śāstra by S. B. Dikshit.
[4] Orion, page 82.

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hypothesis is now given up by modern astronomers as mathematically incorrect; but no reason has yet been assigned why it found place in the Hindu astronomy. A theory may be erroneous but even an erroneous theory cannot become prevalent without a good cause. It has been suggested by Bentley and approved by Whitney that the limits of the libration might have been determined by the fact that the earliest recorded Hindu year had been made to begin when the Sun entered the asterism of Kṛttikā or 26°40′ in front of Revatī. But this alone is not sufficient to suggest the theory of libration. For, unless the Hindu astronomer had grounds—conclusive and otherwise inexplicable—for holding that the vernal equinox fell 27° on each side of Revatī, he would not have proposed the libration of the equinoxes. So far as I know no such ground has yet been discovered by modern scholars."

The theory of a libration had been prevalent in India from very early times and it was a doctrine maintained by most of the Hindu astronomers. The conception of a libration was, without doubt, suggested by the peculiar motion of the Pole of the Equator about the Pole of the Ecliptic.

Precession plays an important part in various astronomical calculations. Of this Rai Bahadur Jogesh Chandra Roy says in his introduction to the Sāhitya Darpaṇa[1], "Before any reformation of the Hindu almanac is attempted, an exact determination of the amount of precession becomes a question of paramount importance. In the Hindu system, the longitudes are measured from a fixed point—say a star—in the ecliptic, instead of from the moveable vernal equinox as is the practice in Europe. The question has therefore the same bearing upon our calculations, as the position of the so-called First Point of Aries upon those of the Nautical almanac. * * * The above fixed point is the starting point of our zodiac, and its longitude is known as ayanāṃśa, which literally means amount of solstices. * * The exact amount of the ayanāṃśa may be apparently determined in different ways. First, the Siddhāntas furnish a rule for computing it, which is in principle the same as the method of finding the longitude of a star at any given date by applying the amount of precession to its longitude, at some other date. Second, defining the initial point with the help of other data, such as the recorded longitudes of stars, its present longitude from the equinoctial point may be ascertained. Third, knowing the exact year when the initial point was fixed, its present longitude (Ayanāṃśa) may be calculated from the known rates of precession. But it so happens that the results obtained by these three methods do not agree."

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[1] Jogesh Chandra Roy's Introduction to the Siddhānta Darpaṇa by Chandra Sekhar Sinha, pages 38–54.

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We have already said that the different astronomical works do not agree, either in the nature of the precessional motion or its annual rate. According to some, the equinoxes have an oscillatory motion, turning to the east and to the west of the initial point within certain limits, and extending over a large interval of time; while the others maintain their continuous motion backwards. A comparative statement of the views of the libration and revolution theorists is given below.[1]

	Annual Rate.
Libration Theory	
Sūrya-Siddhānta	54″
Soma ,, ...	,,
Śākalya ,, ...	,,
Laghu Vāśiṣṭha Siddhānta	,,
Parāśara ,, ...	52″.35
Āryāṣṭa-Śatikā (quoted by Munīsvara)	46″.25
Revolution Theory	
Munjāla (quoted by Bhāskara) ..	59″.9
Bhāsvatī	60″
Grahalāghava	60″

For the third method mentioned above, we have to analyse the dates in which there was no ayanāṃśa and we require also the rates of precession assigned by astronomers. Munjāla is the earliest writer who has given the date of the year of no ayanāṃśa, as well as the rate of precession observed by him. He wrote his work in Saka 854, and the precessional rate assigned by him was 59″.9 a year. According to him, Śaka 434 was without ayanāṃśa. The next work we should refer to is Bhāsvatī by Śatānanda, which is still regarded as an authority for the calculation of eclipses, written in 1021 Śaka; this work gives the rate of precession to be 60″ per year and the Śaka year 450 as the year of no ayanāṃśa. The Grahalāghava, written by Gaṇeśa in Śaka 1442, gives the rate of precession to be 60″ per year and Śaka 444 as the year without ayanāṃśa.

The early Hindu calendar was computed with equinoctial or sāyana year. According to this method of computation one year is the interval of time that elapses between two successive returns of the Sun to the vernal equinox, and owing to the precession of the equinoxes the year beginning had to be changed several times. There are sufficient traces of these intermediate changes. Of all the ancient nations the Hindus alone had well nigh accurately determined the rate of the motion of the precession of the equinoxes. Hipparchus considered it to be not less than 36″, while the actual motion at present is 50″ per year. Ptolemy adopted, as observed by Whitney, the minimum of 36″ determined by Hipparchus; and it is evident that the Hindu astronomers who fixed the rate at 54″ per year could

[1] Colebrooke's Essay on the Equinoxes.

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not have borrowed it from the Greeks. Owing to the shifting of the equinoxes the year-beginning was changed thrice and there are sufficient materials in the literature of India to corroborate the above assertion.

Let us refer to the tradition of Rudra killing Prajāpati, the god of time[1], for receding towards his daughter Rohiṇī. The Aitareya Brāhmaṇa (iii, 33) and the Śatapatha Brāhmaṇa (ii. 1. 2. 6.) describe this conduct as akṛta (अकृत) or unprecedented and such as deserved severe notice by the gods. "This gives the fact that the Sun was gradually receding towards Rohiṇī, by the precession of the equinoxes."[2] Prajāpati, however, was punished for his unusual conduct, and there the matter ended for the time being. But the question was again taken up when the equinox had receded to the Kṛttikās. "The seasons had fallen back by one full month, and the priests altered the year-beginning from Phālgunī full-moon to Maghā full-moon, while the list of Nakṣatras was made to commence from the Kṛttikās, instead of from the Agrahāyaṇa * * *. The calendar was mainly used for the sacrificial purposes, and when the priests actually observed that the Sun was in the Kṛttikās, and not in Mrigaśiras, when day and night were equal, they altered the commencement of the year to the Kṛttikās, specially as it was more convenient to do so at this time when the cycle of seasons had receded by one full month."[3] The Vedānga Jyotiṣa introduced the next change, when the seasons had further fallen back, not by a month, but by a fortnight. Tilak says, "It was probably during this interval that the beginning of the month was altered from the full-moon to the new-moon, and when this beginning of the month was so altered, advantage was taken of the receding of the seasons by a fortnight, to commence the year with the new-moon in Dhaniṣṭhā as the Vedānga Jyotiṣa has done."[4] From this the next recorded step is to Aśvinī and this is the present year-beginning. The present Aśvinī phase was introduced by Varāhamihira of Avanti in the beginning of the sixth century A.D. Varāhamihira says in his Pañcha Siddhāntikā, "When the return of the Sun took place from the middle of Aśleṣā, the tropic was then right. It now takes place from Punarvasu." Again in the Brihat Samhitā,[5] he mentions the same older position of both the solstitial points and appeals to his readers to ascertain for themselves by actual observation what position of the solstices is the correct one.[6] There is, however, one interesting story related in the Mahābhārata referring to an abortive attempt to reform the calendar when the seasons had again fallen back by a fortnight.

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1 संवत्सरः प्रजापतिः । प्रजापतिर्यज्ञः । Ait. Br. ii. 17, Śata. Br. xi, 1.1.1.
2 Orion, page 213. 3 Orion, page 215. 4 Orion, page 215.
5 Brihat Saṃhitā, Chap III, Verses 1 and 2. 6 Orion, page 35.

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In the 71st chapter of Ādiparva we are told that Viśvāmitra attempted to create a new world, and to make the Nakṣatras commence with Śravaṇā, instead of Dhaniṣṭhā ; and the same story is alluded to in the Aśvamedha Parva, chapter 44.[1] It appears, however, that he did not succeed, and the Kṛttikā system as modified by the Vedānga Jyotiṣa, continued to regulate the calendar until the Aśvinī phase was introduced by Varāhamihira.

The question of precession and libration of the equinoxes and the discussions thereon form an interesting part of Hindu astronomy and a careful study of all these observations leads us to the detailed regulation of Hindu calendar and sacrifices. We have, therefore, given here an almost continuous record of the discussions on the subject from the oldest time down to the present found in the astronomical and other literatures of India.

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[1] Orion, page 216.

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Remarks on Günther-Day Controversy regarding the Specific Validity of Hamilton-Buchanan's Cyprinus Chagunio.

By SUNDER LAL HORA.

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In the late sixties and early seventies great controversy raged between Günther and Day, the two eminent British ichthyologists of the period, regarding the relations between *Barbus beavani*, Gthr. and *Cyprinus chagunio* Ham. Buch. The details of this dispute are recorded in the *Proceedings of the Zoological Society, London.* Recently there have come to me certain facts bearing on this point and I have taken the trouble necessary to go into the matter fully. Having the facts at hand I have thought it worth while to make a record of them here.

In 1868, Günther in his Catalogue (VII, p. 96) described *Barbus beavani* from two specimens (one 'adult' 145 mm. and one young) collected in the "Cossye River" and presented to the British Museum by Lieut. R. C. Beavan. At the same time Günther considered *Cyprinus chagunio* of Buchanan a doubtful synonym of *Barbus clavatus* McClelland (p. 97). In 1869, Day while writing notes on the fishes of Orissa (*P.Z.S.*, p. 373) relegated Günther's *beavani* to the synonymy of *chagunio*. A large number of young specimens of the species up to 3·5 inches in length were collected by Day at Midnapore in the Kossye River, but he mentioned that the species is said to grow to 18 inches (Buchanan also mentions that his *chagunio* attains to about a foot and a half in length). In the course of certain "critical observations" made in the "Zoological Record" for 1869 (p. 136) Günther doubted Day's determination and pointed out that "a fish described as having large scales and minute barbels is not likely to be the *B. beavani*" (both the characters referred to here are taken from Buchanan's description of *Chagunio*). In 1871, Day, in order to confirm his determination, referred to the MS. drawing of "? *C. chagunio*" in the possession of the Asiatic Society of Bengal (*P.Z.S*, p. 637), but Günther deferred the consideration of this point in his notes published in 1871 (*P.Z.S.*, p. 764) until he obtained a copy of the drawing referred to by Day. Having obtained an "Accurate tracing in pencil of the drawing" from Mr. J. Wood-Mason, Günther again takes up the subject in 1872 (*P.Z.S.*, pp. 875–878)

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and gives a figure of the head and of the dorsal fin of the species. He admits that the species figured by Buchanan is the same as his *beavani*, but he does not consider it to be identical with Buchanan's *chagunio*. His judgment was based on the fact that the barbels in the drawing are not minute as described for *chagunio* and secondly the drawing represents only 11 rays in the dorsal fin and not twelve as in *chagunio*. He also directs attention to the name "*Cyprinus Runt*" given on the drawing.... "a name which does not occur in Hamilton's works, but which is evidently the same as *kunta*." Lastly Günther points out that *C. kunta* was considered by McClelland (*Ind. Cyprinidæ* p. 340) to be a synonym of *Cyprinus sarana* Ham. Buch. While intimating to the Zoological Society the discovery of "the long-missing papers of Dr. Buchanan on natural history" in 1873, Day offered certain remarks on the "Fishes of Bengal" based on extracts from Dr. Buchanan's manuscript notes (*P.Z.S.*, pp. 743–748). Among his remarks he refers to this controversy again (p. 745) and gives three vernacular names for *chagunio* viz., *Gărhăn* at Puraniya: *Daranggi* of the Tista and *Kunta* of some other places. The following statement occurs in a foot-note on p. 746: "The native name *Chaguni*, employed in the 'Fishes of the Ganges,' finds no place in the MS. notes; but this is by no means a solitary instance. However, in the MS. notes the *Kunta* is the only fish likened to the *C. curmuca*; and in the 'Fishes of the Ganges' the *Chagunio* is the only fish compared to the *Curmuca*, whilst *Kunta* and *Chagunio* are both on the same drawing; the first name is only found in the MS. notes, the second only in the published work." In the *Fishes of India* Day justifies his identification and leaves his critics to answer the following two questions (p. 560): "If *C. kunta* is not *C. chagunio*, what does it represent? and where is the figure of *chagunio*?"

It is, therefore, clear that the points raised in this controversy could be settled if a reference had been found to the local name *Chaguni* in Buchanan's MS. notes. I have great pleasure in announcing that a very clear reference on this point is found in the manuscript volume of the original notes concerning the Gangetic Fishes in the Library of the India Office. The name *Kunta*, *Chaguni* and *Daranggi* are found in one place above the description (in Latin) of *Cyprinus chaguna*, which name in these notes replaces *Cyprinus kunta*. *Kunta* appears to be the name of the fish at Dinajpur, *Daranggi* at Baruni and *Chaguni* is the name in the Yamuna River. Among the habitats of the species are mentioned Tista, Kosi. The most noteworthy entry here is D. 11; A. 8. How Buchanan came to describe twelve rays in the dorsal fin when he noted down only eleven in his notes is a mystery to me. It has already been shown by Day (*P.Z.S.*, p. 746, 1873) that the descriptions of the Gangetic

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Fishes are full of such mistakes. This incidently clears up another point of contention between Günther and Day. I need to refer here only to the dispute over "Has *Cyprinus bata* (Ham. Buch.) nine or ten branched rays in the dorsal fin?"[1] which can be followed by a perusal of the papers cited above.

There seems to me no doubt that *Barbus beavani* Gthr. is identical with *Cyprinus chagunio* Buchanan. I have verified this fact by an examination of the types of *beavani* in the British Museum of Natural History.

I have referred to this discussion at some length firstly in order to clear the specific validity of *Barbus chagunio* and secondly to direct attention to the great harm that has resulted to science by the withholding from Buchanan of his drawings of natural history objects. It is after a lapse of over a century that an indisputable taxonomic position has now been assigned to a common species of considerable economic importance in India.

I have here to offer my sincere thanks to Mr. J. R. Norman for the facilities so kindly extended to me for work in his department.

British Museum (Nat. Hist.).
August, 1928.

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[1] In the original notes there are two entries regarding the number of rays in the dorsal fin. The older one is as follows: "pinna ani radiis 8 dorsi 12," but a later entry is, "radius dorsalibus 11 sen 12 analibus 8."

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Marriage Customs in Behar.

By KALIPADA MITRA.

The following general observations have been based upon enquiries made amongst Bihari Kayasthas.

In the selection of parties to the marriage the four *houses* are abandoned, *viz.*, persons consanguinely related to (1) the bride's father, (2) his maternal grandfather, (3) the bride's mother, (4) the latter's maternal grandfather; similarly these relations of the bridegroom must not be common. This exclusion is technically called *gharavarjanî*.

[Amongst the Brahmans of the Bhagalpur Division *gharavarjanî* is limited in the following way, *viz.*, persons consanguinely related to the bride's father and mother and those consanguinely related to the bridegroom's father and mother up to the seventh degree in ascent must not be common. Besides the *gotra* and the *mûla* must not be identical, or in other words the descendants of the first ancestral father or eponymous ancestor and the first ancestral mother must not be bound in wedlock.]

Then the horoscope of the parties is consulted. If nothing is amiss, then the *shagun* ceremony is fixed. A priest, a barber, and any relation of the bride,[1] *e.g.*, her brother, go from the bride's side to the house of the bridegroom. The latter gives five handfuls of paddy, *pân* (betel) *supâri* (betel nuts) *dub* (*dûrvâ*, *cynodon dactylon*), turmeric (*curcuma longa*), and coins into the hands of the priest. With the following benedictory verse:—

Maṅgalaṃ Bhagavân Viṣṇu
Maṅgalaṃ Garuḍadhvaja
Maṅgalaṃ Puṇḍarîkâkṣa
Maṅgalaṃ tanoti Hari

the priest sprinkles on the bridegroom the contents in his hands. The ceremony is in fact tantamount to an announcement to the village that *tilak* has been fixed, and arrangement for marriage has been made.

Then follows the *Tilak* ceremony. An odd number of people, headed by or in company with, the priest start at an auspicious moment from the bride's house with presents and proceed to the bridegroom's. The things are placed at the yard of the groom on a spot which was previously scrupulously

[1] But custom differs; it is not necessary. *Shagun* is not observed amongst the Brahmans; consulting the horoscope is optional.

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cleaned, *e.g.*, by means of a cowdung wash. The ladies of the *basti* or the village of the bridegroom sing songs allusive of the marriage of Hara and Pârvatî, or of Râmachandra and Sîtâ and often substitute the name of the bridegroom for Hara and Râmachandra, and that of the bride for Pârvatî and Sîtâ. The carriers of the things from the bride's side are regaled with songs in which they are humorously abused.

In the *tilak* rite the bridegroom does not squat, but sits on his haunches. Unhusked paddy or *âruâ* rice smeared or tinged with turmeric is touched to the feet, the knees, shoulders and the head of the groom by five women belonging to the family of the groom, or his female friends and relatives. They must be women whose husbands are living (*sohâginî*, *sadhavā*).

[5 or 10 per cent. of the *tilaka* money is given to the priest of the bride as *dachchinâ*. But this is now becoming obsolete, *Zâdrâ* or lump sum being given to the priest for his services.]

Immediately after the *tilaka* ceremony the bride's party sends to the groom's party a letter containing the names of the relatives and the villagers in humorous verses. This is called *nâma lekha*, or *ishm-nabisi*. The date of the marriage is fixed herein, and communicated. The groom's party in its turn sends a letter to the opposite party containing the names of the relatives of the groom and his villagers. This is called the *patrî*, which often takes the form of amusing verses. The letter carriers (*patra vāhaka*) from the bridegroom's party must be odd in number, and one and a half of or more than those who come from the bride's party. Letter carriers of both parties are of course rewarded.

The day of *lagan* is then fixed at a performance of *laganbaṛî* rite. Five *baṛîs* (a sort of a cake made of pounded gram made into a paste three or four inches in length) are placed in the hands of the bride and the groom at their respective houses, together with *âruâ* rice (sunned), *yava* (barley), and *sindura* (vermilion) by the mother. These are touched to the feet, knees, shoulders and the head of the parties, as in the *tilaka*. The bride, as well as the groom, empties the contents on a *Khâṭiâ*, or *chârpâi*. Merry songs are sung by females who crack jokes at the expense of the parties. Unmarried boys and girls must not touch the *baṛîs*.

Then follows the *uvṭana* ceremony.[1] Barley must have been previously carried in procession, sometimes accompanied by music, to the *Kaṇsâr*. The *Kaṇsâr* is a place kept generally by a female of the Kâno caste, whose business it is to fry gram, barley, maize, etc. She fries the barley which is carried back

[1] This order is not invariable. This takes place once at the time of *Shaguna* ceremony, once at the time of *tilaka*, and then daily after the *lagan* (the entire period from the fixing of the auspicious time to the day when the bridegroom starts for the marriage).

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in the same way. She is of course rewarded for her office with money and *Sâṛis*.

Frying the *Yava* is essential. It is then pounded. Besides pounded barley the following ingredients are also used: *viz.*, pounded mustard, turmeric, *Kachur*,[1] root of *muthâ* (Sans. *musta, mustaka*, Beng., *muthâ, cyperus rotundus*), *jaṭāmâmsî* (*nardostachys jaṭamamsi*, Spikenard), sesame and mustard oil. Five women whose husbands must be living, besmear the bride and groom, at their respective houses, with this unguent for seven days, at least once daily, it may be thrice. The groom is not allowed to bathe all these days. He wears a cloth tinged with turmeric. He must not leave the compound of his house for these days, apparently to avoid the evil eye. He must not look into the well or undertake to do anything which is regarded risky.

The practice of besmearing *uvaṭana* was prevalent in Bengal as is evident from the old Bengali literature, *e.g.*, the *Manasā maṅgala* where we read :—

Uvaṭana haridrā mākhāya Behulār aṅge

Even during modern days it is used among the Rajput castes in Jaṅgipura in Bengal. A gentleman told me that it is practised in some parts of Orissa where it has become *rûpṭāna* by a curious process of folk-etymology (cf. *rûpakathā* for *upakāthā*) which is taken to mean a beautifier (lit. that which when used draws out beauty).

In the districts of Gaya, Patna and Monghyr the ceremony of *dâl dhoi* (washing of the cereals) takes place one or two days before the marriage either on the day of the *Maḍwâ* or the day before. Five women touch rice and turmeric to the feet, knees, shoulders and head of the groom, then put *dâl* (pulses) in new baskets, which are then placed on the head of a *dâi* (maid servant, generally a Kâhâr woman). The baskets are covered over with a new cloth, tinged with turmeric, and portion of this is stretched over the heads of five women who in procession go to a well,—which is generally used on such auspicious occasions—or tank, or river, with music and song. This takes place at the first part of the night. The sister of the bridegroom washes the cereals with water *raised by one hand only*. She then scatters the pulses to the four quarters addressing the guardian deities (as *he pachchhim kumâr, he pûrab kumâr*) with prayers to them not to harm. Then these are distributed amongst those present. The bridegroom remains at home.

[1] *Sans. Karchura, Karvura, Shadgranthikā ; Bengali. Kachoora*, tubers "inwardly of a pale, yellow or straw colour, and possess an agreeable camphoraceous smell and warm bitterish, spicy taste," of the curcuma species. See W. Roxburgh, *Flora Indica*, p. 7. My informant says that this is supplied by a low caste people named Kādar.

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The scattering of the pulses seems to be a magic device of charming away the evil and bringing in of good luck and protection from harm which appears to receive corroboration from the explicit invocation to the guardian deities of the quarters for protection.

On return they put in some unhusked paddy, often red, in a *Ukṛi* (wooden mortar). Five women and the bridegroom together hold the *samât* or *mûṣal*, *i.e.*, the pestle, and strike together the contents five times. Then with *one hand* each takes five or seven grains of rice thus husked out of the *ukṛi*. All these rice grains are placed on a mango leaf which is then rolled up with a red string and wound round the wrist of the bridegroom who takes it off only on the fourth day of bathing after the marriage.

According to some this ceremony takes place at the *janvâsâ*. Eight men including the bridegroom strike the paddy eight times. This is called *âṭhoṅgar*. If it be the bridegroom's first marriage then all the seven other people must be 'first married.' *Non*-married persons must not participate in the ceremony. In case of the bridegroom's second marriage the people may be 'first-married' or 'second married.' This looks like an instance of homeopathic magic.

The working of the husking pestle and mortar, the anointing of the bride and bridegroom with exchange of unguents in most places, and the several ingredients used in the ointment such as barley, turmeric, etc. credited with evil-scaring and vegetative properties make up an elaborate fertility charm.[1]

Following the *dâldhoi* the *mâḍwâ* ceremony takes place. A *mâṛwâ* (*maṇḍap* or *yajñaśâlâ*) is raised. Earthen elephants and other earthen wares are placed and worshipped. *Dhân* (paddy) of natural red colour is placed on the elephant which supports a *hâṇḍi*, on which a lamp is lighted. On the top of a *kalasa* (jar) which is filled in with water consecrated by *mantra* is placed an earthen lamp having four beaks (*catur-mukhî pradîpa*) fed with ghee. On the return of the bridegroom from the marriage both husband and wife are bathed with water poured by his elder brother or his maternal uncle over them from the earthen jar. The bridegroom's party feed all his caste-people on the *mâḍwâ* ceremony day. The *maṇḍapa* is specially very important at the bride's house, whereit is decorated as splendidly as possible, especially because at this place the marriage is performed.

Associated with this is the *hardi-chaṛâonâ* ceremony. Some turmeric (*hardi*) paste is liquefied and in this liquid a stone is placed on a plate. People make presents. Then follows

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1 Crooke, *Religion and Folklore of Northern India*, 1926, p. 245.

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the *ghî-dhârî* ceremony. Some *ghee* is dedicated to the *kula-devatâ* or the household deity, which is then poured over the bridegroom by his father and mother who should fast. Sometimes the brother or the uncle officiates. Songs are sung at the time. The *uvṭana* is suspended on this day. *Ghî-dhârî* is not performed for the bride on the same day. When the bridegroom's party is in sight in the village of the bride, this takes place at her house. *Ghî-dharî* happens once in the lifetime of the groom, hence in case of his second or subsequent marriage this is omitted.

Kayastha grooms whose family custom is to wear *janau* which is ceremonially performed omit *mâḍwâ* and *ghî-dharî* ceremonies, especially the Karaṇa Kayasthas.

On the next day the interesting ceremony *pânikâṭâ* (lit. cutting the water) is gone through. *Pâtwâsi* (a brow-plate made of cork) is hung on the brow of the bridegroom by his sister (or in her absence, his father's sister) and his sister's husband (or in his absence, his father's sister's husband). They start with an earthen pot or *loṭâ* to a water-place (which is generally resorted to on marriage occasions) accompanied by a procession of females. The sister's husband has a sword in hand on the point of which is fixed a *pakwân* (some cake of flour cooked in ghee), or *maṅgror* (balls of flour cooked in ghee), which must have been offered to the *kuladevatâ* at the time of the *ghî-dhârî*. He draws water and pours it on the blade of the sword which is held on an earthen pot (*cukḍi*) with its keen edge upward by the sister so that the water divided by the edge (lit. cut) falls into the *cukḍi*. The water accompanies the bridegroom's party (barât). The ceremony is also performed at the bride's house.

On return the rite of *lâvâ-bhuñjâ* (the frying of paddy) is performed. The sister's husband sits on a *morhi* (grainstore) made of straw. On a new oven which must face the north is put a new earthen pot on which the groom throws a few handfuls of paddy at intervals. The sister fries the paddy and the husband stimulates the fire in the oven. The fried paddy is then sold by the sister's husband to the groom, and his father, mother and relatives also purchase it for money.

The water of *pânikâṭâ* and the fried paddy accompany the *barât* and are subsequently used on the *vedi*.

In some places two days before the bridegroom starts for the bride's village an interesting ceremony (*vidh*) takes place. This is called *âm mahuâ kâ bihânâ*, or the marriage between the mango and the mahua (*bassia latifolia*) trees. Before starting for the place the elder sister of the groom puts collyrium (which charms away evils) on his eyelids. He holds in his hand a knife on the blade of which is fixed a betelnut. The sister holds in her hands the half portion of a yellow cloth, the other half of which is placed on the head of the groom. He then starts followed by her. The female relatives of the groom take him

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to a place where mango and *mahuâ* grow. With a branch of the mango vermilion is placed at the foot (lit. *jaḍ*, root) of the *mahuâ*. The mango in this case is the male and the *mahuâ*, the female party. The ceremony is regarded auspicious and I think is an instance of sympathetic magic. The object may be to secure the spending out of all malignant influences, if any, on this preliminary tree-marriage so that the actual marriage becomes unimpeded and smooth in its course, or it may be a case of fertility charm. Instances of association of the tree with marriage in varying forms have been given by Crooke.[1]

Just before the groom starts for the marriage from his house the nails are pared by the barber and he is shaved. This is called *nahsu* or *nahchu*. At this time the bridegroom is blindfolded and the little finger of his right hand is slightly punctured. The blood is drawn on a betel leaf which is subsequently administered to the bride in the belief that mutual love between the pair will increase. Similarly the little finger of the left hand of the bride is punctured, the blood drawn on a betel leaf and likewise administered to the groom. This administering is pretended to be clandestine, and the persons do not know it. This process is technically called *Sineh kâdnâ* (increasing of love). This is also variantly called *yog pilay* (lit. union drink).

Then a washerwoman bathes the groom who is seated on a *pâlo* (yoke) (in some places the yoke is put on a small pit dug for the purpose). With *kâjal* or collyrium the eyelids are painted. Music accompanies. When the groom sits in the palanquin just before starting, his mother comes and applies her teats to his mouth. This probably serves to remind the son of his primary duty of affection for the mother and his love should not be wholly monopolised by the wife he is going to wed, or this may be a magic in disguise established by the superior claims of the mother to the love of the child over that for his new wife.

After the *pânikâṭâ* ceremony at the bride's house the party return from the water place to the house and then the women start in procession in the direction from which the groom is expected to come. Accompanied by music and songs they go outside the village in the fields. Then some female lies down with the *cukḍi* containing the water of the *pânikâtâ* ceremony under her bosom. The mother carries the bride in her arms and leaps over the lying female. The bride's brother brings a sprig of *ciḍciḍi* (*apâmârga*, *achyranthes aspera*) to the party. This is called *yoga mângnâ* (or praying for the union).

Apâmârga is largely used in magic. In the *Atharvaveda*

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[1] *Op. cit.*, pp. 404, 415.

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(IV. 17) its use is prescribed in warding off death causable by hunger and thirst, *sterility*, want of cattle, etc. along with charmed water in which *darbha* (*poa cynosuroides*) and *sahadevi* have been put. In the *Atharvaveda* (VII. 65) it was used in baffling the effects of curse. The whole ceremony in which the consecrated water of *pânikatâ* is used, the mother leaps with the bride over the prostrate female, etc. looks like a magic performance to ward off evil from the bride, to keep from harm the direction from which the bridegroom comes, to secure a successful termination of the engagement, and to prevent dangers of sterility.

When the *barât* arrives at the village of the bride and before it is accommodated in the *janavâsâ* (temporary quarters), the bride's party sends a letter to it known as *bara nimantraṇa* (lit. invitation to the *barât*).

Then the bride's father and the groom's father meet and the former pays money to the latter. This is known as the *samdhi milan* (or the meeting of *Vaivâhikas*).

The *barât* then comes to the *janavâsa* or temporary residence for the bridal party to put up.

Meanwhile the groom is carried in a *pâlki* (palanquin) to the door of the bride's house, and the interesting rite of *dwâr-lâgâi* is then performed. The bride's father, or in his absence any other relative, gives money or any other presents to the groom. Some one then brings milk from the teats of the bride's mother, or in its absence some *sherbet* which has previously been touched to her teats. This the groom drinks. This is a sort of affiliation and the groom is regarded as the son of his being mother-in-law. Then he returns to the *janavâsâ*.

Now when all are in *janavâsâ* five (or even one) maid-servants of the bride's party accompanied by the priest and the relatives of the bride go there. They carry on their heads five (or one) pots (or pot) filled with water and covered over with one piece of yellow cloth. The woman in front carries a sword in her hand (but the practice is not invariable). They are received by the groom's party and paid in coins. This is called the *dhoyâpâni*. The priest of the groom asks the forewoman of the party thus :

Q. Whence do you come ?

Ans. From Kâmarûp.

Q. And for what purpose ?

Ans. To seek the groom for the bride, or after touching the bride we have come to touch the groom.

After this conversation *uvṭana* is scattered among the *barâtis*.

It is well known that Kâmrûp is regarded amongst the Hindus to be the land of magic and *tantras*, and believed to be the place where youngmen going there were turned into sheep and kept under complete control by the fair damsels of that

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fairy land. The insinuation is that the husband would be sheepish and quite submissive to his future wife, perhaps credited with all conceivable Circean charms.

Then *bahas* or intricate questions and their answers are exchanged between the parties, as merry intelligence tests, for the questions are so designed that they are riddles and enigmas and are difficult to answer.

After the return of the females of the *dhoyâpâni* the groom in a *pâlki* is borne by carriers (of the Kâhâr caste) of the bride's house. He is there received by the females, and then his *ârati* or *parchhanâ* takes place. On a plate are put betel, ghee, lighted camphor, *dub*, curds and *âruâ* rice. All the women, with hands or with leaves of *pân*, warmed over the light, individually foment the cheeks of the groom and put a mark of curds (*dahikâ ṭikâ*) with finger tip on his brow. This is called *gâls-ti*.

The *ârati* is a mode of worship or a manner of showing respect to gods or to those to whom honour is due. The *mantras* of the marriage show that the bridegroom is regarded as an honoured guest who deserves to be welcomed in the way mentioned above or it may have a magical significance. N. M. Penzer says.[1] :—

In Upper India the customs at Hindu weddings connected with the warding away of spirits is called *paracchan*..." or it may be a charm against the evil eye.

After this the mother-in-law comes and spreads her apron before the groom who throws therein a whole *hâṇḍi* of sweets. Images of Hara and Pârvatî made of *âṭâ* (flour) taken there by the groom are then given to the mother-in-law.

Then follows *pân bichchhi* or the scattering of *pân* leaves. The groom alights from the *pâlki* ; the bride then gets in there accompanied by her elder brother's wife, or in her absence, her mother. A woman on each side of the *pâlki* stands holding a new and a turmeric-tinged cloth passed underneath it. Then the bride throws five betel leaves on one side. They are picked up by the groom and handed over to the bride who again throws them on the other side. The groom goes to that side crawling under the *pâlki* and again picks them up and hands them over to the bride. During this process he is beaten with a shoe by his brother-in-law. The mild form of the treatment is salutation to the shoes by the groom. I doubt not that this is intended to bring in good luck just as in English weddings this is lustily practised for the same purpose as I have been informed by an Englishman. Is it a form of flagellation which is reputed to chase away evil spirits or evil influences and thereby bring in good luck ?

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[1] N. M. Penzer, *Ocean of Story*, Vol. VI. (1926), p. 109, Footnote 1. See also Crooke, *op. cit.*, p. 293.

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Then the bride and her *bhojâi* (brother's wife) sit together, or lie together, covered over with a cloth and then the groom is asked to find out his wife. The *bhojâi* kisses the bridegroom. Sometimes a lad takes the place of the *bhojâi*.

When the bridegroom comes to the *maṇḍap* he is presented with a new cloth. Seven married men and the bridegroom place eight handfuls of red paddy in a *ukḍi*. They are bound round by a thread by the priest. They then hold the pestle together, strike eight times the contents, take a few grains of rice which are then wound up and strung round the wrists of the bride and the bridegroom.

The most important ceremony takes place at the *maṇḍap*. To the accompaniment of the recitation of sacred texts the priest places the hand of the bride on that of the groom and both their hands rest on the upraised palm of the bride's father. This is *pāṇigrahana* or the taking of hands. Water is then poured by the father through a chank which is placed on the hand of the bride who is embraced by the groom. This is called *Śaṅkhpâni*. In the absence of the father, the brother or any other relative officiates. This is the celebrated water of donation (*dakṣinodaka*) which from time immemorial sanctifies all gifts, and therefore, also the gift of the bride.[1]

Then the *agnihoma*, or sacrificial fire is lighted and the necessary ceremony follows. The bridegroom and the bride then circumambulate the *Vedî*, or step what is known as the *saptapadî*, or the seven steps; this is also called the *bhāmar*, or going round. They do it seven times. The bride steps in front with the groom behind who holds a hand of the bride in his own.

Thereafter fried paddy is scattered round. This is called *lâvâ-chiṭnā*. A small winnowing fan (*sūpa*) is placed on the hands of the bride, and on the fan some fried paddy (*lāvā*) is placed by the bride's brother. It is then scattered round. This has also a magic significance, *viz.*, evil scaring. This is also regarded as a fertility charm by Dr. Crooke.[2]

Then the ceremony of *sindurdāna* or the application of vermilion takes place. The bride's brother and his wife spread a thin cloth, held at both ends by them, over the head of the bride, which is uncovered, just close to and above her eyebrows. The vermilion on the cloth is stirred by the groom which falls on the point of the parting of the hairs of the bride. Or vermilion is applied by the groom with a flaxen pellet (lit. Ś'an), or a fruit called *sohagilla*, or a small ring, to the *sīthi* (parting of the hairs).

After *Sindurdān* when the pair are taken to the *Kohbar* or the marriage bower or the chamber, the bride's brother makes a feint of opposing the procession. He is pushed away and the party proceeds to the *Kohbar*. This is a reminiscence of

[1] N. M. Penzer, *Ocean of Story*, Vol. VII, p. 79. "She brought water and poured it on the hand of that thief and said: 'I give you this my maiden daughter in marriage'."

[2] *Op. cit.* p. 327.

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marriage by capture. The bridal chamber is sometimes decorated with *âlipanâ* painting, done with finger-ends dipped in a solution of powdered rice, on the floor and the walls of the room.

Marriage takes place both at day and night.

We have already noticed the peculiar rite of drinking the blood as *yoga pilây* (union drink), or *Sineh Kâḍnâ* (increase of love) drawn from the punctured little finger of the bride and the bridegroom. In some places, in addition, another sort of love potion is administered. Leaves of sensitive plant (*lajauni, mimosa pudica*) together with other herbs, are ground with water and made into a potion which is offered to the groom at the bride's house by the *vidhkarî*, or one who performs the rites.

The custom of mixing or exchanging blood prevails among certain Bengal tribes. F. C. Conybeare alludes to the custom in Brittany where the bridegroom sucks a drop of blood from an incision made below the bride's left breast.[1]

Then there is the practice of application of vermilion, or the fixing of *ṭiklī*, or spangles worn by Hindu women of good caste, which forms part of the *sohāg* or the lucky trousseau. It is affixed to the girl's forehead at the marriage, and is worn until her husband's death. The basis of *ṭiklī* being vermilion, if it is worn, vermilion may be dispensed with.[2]

Evidence seems to point to the fact that all these uses of vermilion or red lead are later survivals of the original blood rite by which a woman was received into her husband's clan. This explanation has not however found universal acceptance, and Westermark (*History of Human Marriage*, vol. III, pp, 446–448) considers that colour red is used in marriage rites in circumstances which do not allow us to presume that the use of it is the survival of an earlier practice of using human blood. Although he does not advance proof to the contrary, he gives a large number of useful references on the use of red in wedding rites. Dr. Crooke in a paper on "*The Hill Tribes of Central Indian Hills*" (*Journ. Anthropol. Inst. Gt. Brit.*, New Series, vol. 1, 1899, p. 220, *et seq.*) in which he mentions a case of marriage by capture in which a Bhuiyār girl wrestles with a youth as he applies vermilion to her hair. He says "More obvious still is the motive of the blood covenant. Here we can observe the stages of the degradation of custom from the use of blood drawn from the little finger of the husband which is mixed with betel and eaten by the bride among some of the Bengal tribes (Risley, *Tribes and Castes of Bengal*, ii. 189, 201). The next stage comes among the Kurmis where the blood is mixed with lac dye, lastly comes the rite common to all the tribes, by which the bridegroom, often in secrecy, covered by a sheet, rubs vermilion

[1] F. C. Conybeare, *A Brittany Marriage Custom in Folklore*, Vol. XVIII, p. 448 (1907).

[2] N. M. Penzer, *Ocean of Story*, Vol. II, p. 22 ff.

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on the parting of the girl's hair, and the women relatives smear their toes with lac dye—all palpable degradation of the original blood rite. That this rite is sacramental is clearly shown by the fact that the widow after her husband's death solemnly washes off the red from her hair, and flings the little box in which she keeps the colouring matter into running water.[1]" I have myself seen that when a Hindu Bengali husband of the Kayastha caste was dead, on the litter on which his corpse was placed, was put the *Sindur Kauṭā* (box) which was consumed along with his mortal remains.

Blood covenant was necessary in an age of distrust and mutual hostility and solemn pacts were entered into by the transfusion of the blood of the covenanting parties into each other's veins, which knit them together for life.[2] Amongst many tribes, this is still practised, commonly styled "blood brotherhood," or if the parties be a male and female, they are looked upon as brother and sister, who though belonging to different septs or different tribes are faithful to each other unto death and never do an unfriendly thing.

From the time of the Atharvaveda down to our modern days numerous devices are practised as love charms and the literature is redolent of them.

The bridegroom is invariably accompanied by his younger brother or some young person as he starts for the bride's house called *Shāhbalâ*, 'corresponding to *Nitbara* (in Rádh, Bengal) or *Mitbara* (*mitra-bara*, friend of the groom, being his playfellow of younger days) in Bengal. Does it point to a relic of the one-time prevalent custom so widely practised of the levirate? The rather free behaviour of the wife towards her husband's younger brother noticed in the account of kinship relations of various tribes, and races—her potential future husband—tends to add strength to the hypothesis.

The sister of the bridegroom figures prominently in some of the marriage rites, *e.g.*, *Dâl dhoi, lâvâ bhunjâ* and *âm-mahuâ kâ vihânâ*; the sister of the bridegroom's father takes the next place. It is the lingering trace of matriarchate in these rites.

I am appending eighteen marriage songs some of which have been collected for me by my student, Chandrika Prasad, for which I am very much thankful to him.

I have tried my best to translate the songs which also I am appending. I hope I have succeeded in preserving the sense, though, perhaps, I may have erred in one or two words or passages.

The songs possess a charm all their own, both for the quaint language and the sense they convey.

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[1] *Ibid. loc cit.*

[2] Frazer, *The Golden Bough* (1923), pp. 202, 113.

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APPENDIX A.

Text of Marriage Songs.

(1)

General Songs.

Rājā Janakjī ko kanyā kumārī,
ghar ghara piñāti paṭhāvata hiñai,
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

Rājā Dasrathajī ko cāriyo putra,
Raghuvara cāpa caḍāvata hiñai,
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

Yo bariyāt saḍaka bic āyo,
rāhi musāfir gher liyo;
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

Yava Raghunāth baṅglā bic āyo,
Sālā sasuran gher līyo,
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

Yava Raghunāth maṇḍap bic āyo,
paṇḍita veda paḍhā vata hiñai
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

Yava Raghunāth kohbar bic āyo,
sālī sarhajan gher liyo,
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

Yava Raghunāth mahal bic āyo.
choṭī aisī lāḍo ne gher liyo,
Raghunandana candana khabar diyo,
gajavāji uḍāvata āvata hiñai.

---

(2)

General Songs.

(*Kumārī gīt*).

Jhaḍokhā baiṭhali Sītā sundarī, kānta dekhi naynā ḍhare.
Pātar hāi Raghunandana; kaṭhina dhanukhā bhaye.
Eho dulahā yava hāri hiñai, kona vidhi viyāha huye,
Rāmhi toḍlā dhanuṣa oahiñi, Muni śav jay jay kare.
Parasurāma khabar janaulā. Rām Sīyā viyāh huye.

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(3)

General Songs.

Janak gṛha Sītā Kumarī aur Rāma dulahā bhaye :
Muni sava mil sava hāla likhi patra Avadha cale.
Munike vacana yava sunala Rājā, mana cita haraṣīta bhaye ;
Ḍālā bhari sonā deṅge, mālin, ajab jahāja bane.
Māli guthe campā maurī, sonekā chatra ḍhare ;
gajbar diyā hāi nagāḍā, nṛpati bariyāt cale.

---

(4)

Tilak Song.

Gaṇapati caraṇa manāiye rāciye, sārise sohāg kiyā sārise,
Sohāg Rukminī Kṛṣṇaker se kāminī ihṁā dahi de janamdehri,
Rācahi ko rasakām koi sakhi he sājahi devāi patrā manāi ke,
Koi hasti caḍke dān dije Iśvar Rukminīke,
Rukminī ker viyā ha Rukmā gaja ṭhṁāḍ hoye ṭhān Rukmā jo ṭhān Rukmā jo de tavse Sisupālse
Āh Rukminī jo vāt janāve, Kṛṣṇa āye duāre āye.

---

(5)

Tilak Song.

Janak Kumarī ko viyāha, so maṅgala gāiye gāyi.
Maṅgala cāhu yuvatī yuvatī mukha añcala divo, cīrā pahīran kanak ābharaṇ, pān mukh me bhari divo.
Śir śobhe sindur bindur rabiyan ugi parāte āye,
Candar badan utejita unko, pulăkita sur gāyiye.
Lāl piyar khule māḍvā pān mukh me bhari divo,
Cirāpahiran kanakābharaṇ, pān mukh me bhari divo.
Kanak thambh besi tar kanake kanak kalsā yahṁā, dhar bharpur jalkar āmrapal haldi upar phulhar dhare,
Purahar te tāpus chāiye viparā bolāiye, vidhi se choukā purāīye, viprā bolāīye.

---

(6)

Tilak Song.

Gaṇapati gahiye Gaṇeś, Iśvara gahiye Gopāl.
Se Sītāker dulahā nandan, nahi e jagatar cand,
Iye Sītāker nātha sanātha hṁai, Raghukula ke ānand.
Avadhpati, Avadhpati, ānaho bolāī he,
Āhe nanhā sana purukha Raghunāth, tāke vijaya āye.
Baitho Rām samhāro āsan, jhalak hīrā lal dai ;
thār bhari gajmoti ānala, hīrā mānik lal hāi.
Āhe, mālīnike paral hai kār sirahi bhari sindur ;
hāth hastinī diyo kaṇthe vāje nepur vāje hai ;
harakhi ke jab calala malīnī, Rām Candra dohāi hāi,
Āho, malīnike āro cāhīye paṭor sirahu bhar sindura hai.

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(7)

Lagan Song.

Subha ghaṛi lagan dharāo, viyāhan ciravi rakhāvan;
Govarahi aṅgnā nipāo, gajomoti caok purāo.
Suvaraṇahi kalasa dharāo, dīpa varāo, Raghunātha—
viyāhan ciravi rakhāvan.
Āni baiṭhāo Dasrathjīke beṭā, matiyan ājhuri bharāo,
Āni baiṭhāo Janakjīke beṭī, sindurani māṅgiyā bharāo.
viyāhan cīravi rakhāvan.
Āni baiṭhāvala dulrāitā Bābuko, matiyan ājhuri bharāvala;
Āni baiṭhāvala dulāri beṭike, sindurani māṅgiyā bharāvala
viyāhana ciravi rakhāvan.

---

(8)

MARRIAGE SONGS.

Beṭe Kā sehlā.

Khojěte khojěte mālin sahar paisgele Āre kaun Rājā ghar śādi re,
Motidarse guthegā sehlā, guthilā āure merī gorī mālinīyā
Eh dekhun malini uṁc darwājwā.

Hāthi laḍe ghoḍā āvere, Āre hāthi ghoḍā āvere,
Moti darse guthegā sehlā guthilā āure merī gorī māliniyā.

Āvo āvo mālini beṭe darwajweme, Āre, karu bhāri yākī mōl re,
Moti darse guthegā sehlā guthilā āure merī gorī māliniyā.

Lākhon mālinī mol karatuhain, Āre, āro, nav bābā dilā aur āre nav cācā dilā; aur moti darse guthegā sehlā guthilā āure merī gorī māliniyā.

---

(9)

Beṭe kā sahānā.

Sonā ke khaḍmā caḍhi ṭhāḍ dulrāitā Bābu,
Maliyā mālini hṁāk pāre, ge māi,

Maliyā je sutal bāgre bagicvā,
Mālini sutal phulbariyā, ge māyi.

Uṭhi kṁāye mālini maliyā jāgāvaye,
Duāre dulrāitā Bābu thāḍ, ge māyi.

Ān roj āre gamruā galiyṁo na āvaye,
āju kaise duāre hi ṭhāḍ, ge māyi.

Kiyā tōr ghaṭlo gamru gaḍ re gaḍpuā,
Kiyětor bhaṭijā muḍanvṁā, ge māyi.

Nahi mor ghaṭle māliniyā gaḍ re gaḍpuā
Nahi mor bhaṭijā muḍanvā, ge māyi,
Hamrāhṁu ghar māliniyā laganā utahul,
Aro gaj maurā guthi deho, ge māyi,

aro gaj aro gaj ghosṁoho dularuā,
aro gaj mor kaisan hoi, ge māyi.

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Ātho hāṭi guthi hāi māliniyā ālre jhālre
Bic me guthal cm̃ād surajvā, ge māyi.

Sehe pahari yava niksu Rāmji Bābu,
Mohi rahle parivārvā, ge māyi.

Bāṭ hi rijhato dularuā bāṭ re baṭohiyā,
Kṁuyevm̃ā rijhato pāni bharni, ge māyi.

Mādvā hi rijhato dularuā beṭi ke bāp,
Vedī tar beṭi ke māyi, ge māyi.

Kohbar rijhato dularuā sāli sarhajiyā,
Palaṅgā rijhato dulhiniyā, ge māyi.

Dhany tohar māyi dularuā dhany tohar bāp,
Jihi kokhi lelehe avatār, ge māyi.

Yakhni hi ammā mori bārī re vayasvā,
Pair gholiye gholi pailani, ge māyi,

Kuchhu khāili kuchu pair paili
Kuchu pair dui ḍhalkailan. ge māyi.

---

(10)

Gaṇpati ji kā—uvṭan lagāneke samay gāyā jātā hai.

Śri Gaṇpati vandiye Hari Hari
Tahm̃ā veṇī nidhir maṇḍap cārũ
Lagām̃o Hari uvaṭana.
Tahm̃ā gāi ke govar aṅgnā lipām̃o
Lagām̃o Hari uvaṭana.
Tahm̃ā gajmoti cauk pūrām̃o
Lagām̃o Hari uvaṭana.
Suvarṇ kalas' lm̃āye pūrhar dharm̃u
Lagām̃o Hari uvaṭana.
Tahm̃ā maṇimaya dīpa bharāye
Lagām̃o Hari uvaṭana.
Sonā ke sīhāsana āsana lāym̃u
Lagāiiye Hari uvaṭana.
Tahm̃ā Rādhe Kṛṣṇa āni biṭhāval
Lagām̃o Hari uvaṭana.
Yav aur gahm̃uā ker uvaṭana lagām̃o
Lagām̃o Hari uvaṭaṇa.
Tahm̃ā rāisarisvā tel
Lagām̃o Hari uvaṭana.
Sonā ke sm̃idura bhari sm̃idura
Lagām̃o Hari uvaṭana.
Tahm̃ā pm̃āc sohāgin maṅgal gāval
Lagām̃o Hari uvaṭana.
Tulsidās prabhu eho maṅgal gāve
Lagām̃o Hari uvaṭana.
Tahm̃ā le darpan mukh dekhm̃o
Lagām̃o Hari uvaṭana.

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(11)

Maṇḍapa Song.

Māḍvā sobhe Rām Jānakī;
Caukāb aithe samadhi samadhin,
Janakgṛhame cahal pahi;

Bhūpa sajike barāt āyo,
Suyana amṛta yahm̃ā rahe,

Barāt sarāt sm̃a bhāmari khulm̃ahi,
Māḍvā sobhe joḍi.
Raṅga kesari pāg jāmā,
Kān motihu lahi,

Dasratha Janaka parbodhiye,
Bhayo man māni.
Sira dina sindur Rām dulahā
Sīyā sundar khulm̃ahi,

Vāju vāju Janaka gāna guṇa karu,
Nita amṛta jaya bolo;
Sīya Rāmse ānanda bhayo,
Suralokse phul jhari paro.

---

(12)

Āśīrvād—bivāh ke samay.

Hari bol sindurā dān
Gayā Gajādhar Pariyāg Mādhav
Har ḷā jori Baijnāth.
Rāni yuge yuge tohar ehivāt
Rāni yuge yuge.

Badi tap kailehe rāni, gaurā rāni,
Swāmī milalo Bholānāth,
Rāni yuge yuge tohar ehivāt,
Rāni yuge yuge.

Jithm̃u Iśvar Mahādev rānī
gaurā ke ehivāt,
Rāni yuge yuge tohar ehivāt,
Rāni yuge yuge.

Badi tap kailehe Rāni Rādhārāni Pyārī
Svāmi milalo Kṛṣṇacandrajī
Rāni yuge yuge tohar ehivāt,
Rāni yuge yuge.

Yuge yuge jivahm̃u Śri Kṛṣnacandrajī
Rānī Rādhikā Pyarī ke ehivāt
Rāni yuge yuge
Tohar ehivāt, Rāni yuge yuge.

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(13)

Cumānā Song.

Śrī Rāmjīke sehlā virāje,
Ek tilak sobhe līlār,
Cal ho, sakhi, Rām cumāve.

Kānahī Rāmjīke sonā virāje,
tilak sobhe, lilār.
Cal ho, sakhi, Rām cumāve,
Cal ho, sakhi, Sīyājī cumāve,

Ramjīke sirapara chatra vīrāje,
Sīyā gale vana māl,
Cal ho, sakhi, Rām cumāve,
Cal ho, sakhi, Sīyājī cumāve.

---

(14)

Kohbar Song.

Pm̃āc goṭā guebā pm̃aciś goṭā pān,
pālaṅgā baiṭhal hain Rāmji Bābu
khaḍe guā pān,
Palaṅgā baiṭhal hain Rāmji Bābu khaḍe guā pān,

Maciyā baiṭhahli hain Sītā pyārī Rānī badana nehāri,
Kiya mukha āhe prabhu kunne kunāvāl,

Kiyā mukha āhe prabhu gaḍhle sonār,

Ābujha āge Rāni ābujha ajūān
Manuṣya āge dhāni na gaḍhe sonār,

Nagr buliye buli bole kotvāl
Rājā ghare ahe Rāmji Bābu paral haṅkār,

Man mor dăgă magă citta hai udās
Aisani sundarī choṛi na jāiba divān ;

Divān jāibe he prabhu khāibe guā pān,
Baiṭhale cautr caḍhi sunbe pūrān ;

Mukhe khāyibe, hāi prabhu, bari guā pān,
Vacana bujhāibe he prabhu rājā darbār.

---

(15)

Kohbar Song.

Kājijike bāg me cānd hāi Surujvā,
Āre tāhitara Rāmji Bābu dm̃āsal hain sejiā,

Āre hm̃āsate khelate geli lāḍli Sītā pyārī rānī,
Āre lapaki chāil chelā dāhni hai bahm̃iyā,

Āre āju lāḍo yāne na deṅge
Sohāg ki hai ratiyā.

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Āre chod chailā chod chailā dāhni hai bahṁiyā,
Āre phuṭ jāyeṅgē śaṅkhcuḍī masak parihĕ bahṁiyā
Āre āju sohāg ke ratiyā.

Kāhe ke hai saṅkhcuḍī kāhe ke hai bahṁiyā,
Āre āju sohāg ke ratiyā,
Sohāg ki hai ratiyâ,

Āre āju gaurīke yāne na deṅge,
Sohāg ke hai ratiyā.

Āre sonā ke hai saṅkhcuḍī sanjāl ke hai bahṁiyā
Āre āju lāḍo ke yāne na deṅge,
Sohāg ke hai ratiyā.

Āre kini deṅge saṅkhcuḍī joḍāi deṅge bahṁiyā,
Āre āju lāḍo ke yāne na deṅge,
Āre āju gaurī ke yāne na deṅge.

---

(16)

Kohbar Song.

Ghar pichuāre beliyā ki gachiyṁā,
Āge māyi phul phulale caknāriyā (Kacnāriyā).

Seo phulā lodhe gelā Bābu Rāmji Bābu,
Āge māyi loḍheṅge phul kaise kaise loḍheṅge,

Lodheṅge mai to sonā ke ḍālanavā,
Āge māyi gutheṅge hār kaise kaise,

Gutheṅge mai to pāṭkere doriyā.
Āge māyi pahneṅge hār kaise kaise,

Seho hār pahine Bābu Rāmjí Bābu;
Āge māyi pahin calale sasurariyā.
Dhīre calu, dhīre calu, Bābu Rāmji Bābu.
Āge māyi najugī hai dulhiniyā,
Āge pātari hai dulhiniyā,

Ek ek kos gelā Bābu, doi kos gelā,
Āge máyi ṭuṭi khasl phul harvā ge māyi,
Pāniyā bharăte to hain kuṁā pāni harani ?

Āge māyi loki na lṁaĭhe phul harvāge māyi;
Eho hār lokato maiyāre bahiniyā,
Āge māyi our lokto dulhiniyā ge māyi,

Māiyā bahniyā sāmar gharhi me chārlṁu,
Āge māyi komal hai dulhiniyā,
Āge māyi najugī hai dulhiniyā.

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(17)

Kohbar Song.

Kāhvṁahi upajala nāriyal guevā,
Āho kāhvṁahi dṁātrivo pān re, ālbela,
Ālbela dulhā nind ghurme hai.

Maḍwā hi upajala nāriyal guevā hai,
Āru kohbara dṁātrivo pān re, ālbela,
Ālbela dulhā nind ghurme hai,

Seho pān khāi gela lādilā Rāmji Bābu hṁai,
Āho raṅgi gela battīso dṁāt re, ālbela,
Ālbela dulhā nind ghurme hai.

Hansi puche behansi puche sundarī Sītā pyārī rānī hai
prabhu dekhe deho dṁātiyā ke jyoti re, ālbela,
Ālbela dulhā nind ghurme hai.

Kaise hame dekhe devo dṁātiya ke jyotiyā he,
Rāni kohbar sās bahut re, ālbela,
Ālbela dulhā nind ghurme hai.

Dekhalṁu mai, dekhalṁu mai, dṁātiya ke jyoti he prabhu,
Jaisana purnimā nayā cānd re, ālbela.

Hansi puche behansi puche Bābu Rāmji Bābu hain,
Dhāni, dekhe deho maṅgiyā ke jyoti re, ālbela,
Ālbela dulhā nind ghurme hai.

Kaise hame dekhe devo maṅgiyā ke jyoti he,
Dekhat hi lāgata sneh re, ālbela,
Ālbela dulha nind ghurme hai.

Jaisana purnimā nayā cānd re, ālbela,
Ālbela dulhā nind ghurme hai.

---

(18)

Kohbar Song.

Karni ke bāg mahe acche acche hain kaliyṁā,
Tahitara Rāmji Bābu dṁāsal hain sejiyā,
Hṁasate khelate geli lāḍli Sītā Pyārī Rānī.

Lapaki chail chelā dāhiniyā hai bahiyṁā,
Chodo chelā, chodo chelā, dāhini hai bahiyṁā,
Aho phuṭi jāt śaṅkh cuḍi muruk paḍehi bahiyṁā.

Śankh cuḍi phuṭato he sohāve sonā cuḍi pahraib,
Aho, pheru ke gadhāye devo sonā ke kāṅgnā
Sabhvṁa baiṭhala tṁohe sasura (Nārāyan Bābu)

Aho tore putṁā Rāmji todi del hain kāṅgnā.
Kathi ker kāṅgna hai ḍulhin kathi ke khelanvā
Aho kathi hi jaḍal acchā eho bhāl kāngnā.

Sona ker kāṅgana hai sasur rupāke khelanvā,
Aho motiyā jaḍal acchā eho bhāl kāṅgnā.

Hove de dulhiṅ pasarati hai hāṭiyā,
Aho pheru ke aisāhi dev sonaker kāṅgnā.

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Sabhvi̐ā baiṭhala ṭi̐ohe sasurā (bride's father or grandfather)
Aho, raurā ke mahalvā me bhulāi gele he churiyā.

Khathiker curiyā hai Bābu kathi ke khelanwi̐ā.
Aho kathi ke jaḍal acche eho bhāl churiyā.

Sonaker churiyā hai sāheb rūpā ker hai muṭhiyā,
Aho hirvā jaḍal acchā eho bhāl churiyā.

Hove de prāt Bābu pasrati hai hāṭiyā
Aho churiyā oisāhi ke jamāiyā hāṭh hai daiv.

Yava hama hoaib Nārāyan Bābu ke beṭvā
Aho ulṭi na herab dhani eho bhāl hai churiyā.

Yava hama hoaib Kuldip Bābu ke beṭiyā
Aho kanakhi no herab Prabhujī, eho bhāl hai kāṅgnā

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APPENDIX B.

Translation of Marriage Songs.

(1)

General Songs.

There is the maiden daughter at the house of Rājā Janakjī,
Sends he letters to house and house,
Sends the news to Raghunandan, the sandal (of the family),
Comes he fleeting with swift horses and elephants.
There be the four sons of Rājā Dasaratha ; and Rām strings the bow.
Sends the news to Raghunandan, the sandal (of the family) ;
Comes he fleeting with swift horses and elephants.
When the procession came to the middle of the street,
The wayfarers and passengers did it surround.
Sends the news to Raghunandan, the sandal (of the family),
Comes he fleeting with swift horses and elephants.
When Raghunandan reached the outer chambers,
His brother-in-law and father-in-law did him encircle ;
Sends the news to Raghunandan, the sandal (of the family),
Comes he fleeting with swift horses and elephants.
When Raghunandan reached the mandap,
The Pandit was causing the Vedas to be recited ;
Sends the news to Raghunandan, the sandal (of the family),
Comes he fleeting with swift horses and elephants.
When Raghunandan reached the *kohbar ;*
Gathered round him his sisters-in-law (wife's sisters and wives of her brothers),
Sends the news to Raghunandan, the sandal (of the family),
Comes he fleeting with swift horses and elephants.
When Raghunāth reached the inner chambers,
The little wife did him embrace.
Sends the news to Raghunandan, the sandal (of the family),
Comes he fleeting with swift horses and elephants.

---

(2)

General Song.

(Kumarī Gīt).

Song before marriage.

Sits on the window the beautiful Sītā, her eyes bedimmed with tears at the sight of her lord.
Lean is Raghunandan and hard (mighty) is the bow (he is to break) [1]
(Thus muses she), "If this groom fail (in the attempt, *viz.*, to break the bow) how is the marriage to take place ?"

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[1] The reference is to the celebrated story of the breaking of the bow of Hara related in the Rāmāyana at the place of Janaka who promised to give his daughter to wife to the hero who would break it.

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There did Rām break the bow, shouted the *munis* all the shouts of victory (in applause).
The news did reach Parsúrāma ;
That Rāma and Sītā were married.

---

(3)

Song before marriage.

At the house of Janaka be Sītā kumārī (maiden virgin) and the groom, Rāma.
All the *munis* meet and write down all the information in letter which is sent to Avadh (Ayodhyā).
When the Rājā heard the words of the Munis,
Gladdened was his heart and his soul.
Filling the plate with gold shall I give thee, mālīnī, if a wonderful ship thou makest.
The māli wreathes the bridal crown with *campā* flowers,
Casts he a golden crown ;
Mount they the excellent elephant and sound the drums that the king starts on the bridal procession.

---

(4)

Tilak Song.

Salutation to the feet of Gaṇapati ;
Make ready with care the receptacle for *sohāg* (*sindur*, vermilion) ;
For betokening the blessed life of Rukminī and Krishṇa (the bride and the groom) sprinkle *dahi* (curds) on the door frame ;
For increasing the happiness of Iśvar and Rukminī let some one (*sakhi*) make suitable decorations ;
In honour of the *patra* let some one ride the elephant and scatter gifts therefrom ;
It is the marriage of Rukminī,
Rukmā stands at a place with the elephant, ready to give her over to Śiśupāla ;
Ah, when Rukminī sent word to Krishṇa,
A letter arrived at the door that Krishṇa was coming.

---

(5)

Tilak Song.

It is the marriage of Janaka kumārī,
Therefore sing auspicious songs, O sing,
O pray for auspices (*maṅgala*), O youthful girls, and I will reward ye with scarfs (*mukha-añcala*), wearing apparels, gold ornaments, and betel to fill the mouth ;
Shine the dots of vermilion on the head,
As doth shine the sun when peeping in the morning ;
Her moon-face doth beam blooming ; sing ravishing tunes.
Let the *māḍwā* shine with red and yellow ;

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(And for your pains) I will reward thee with scarfs, wearing apparels, gold ornaments, and betel to fill the mouth ;
Near the golden post arrange in greater number the golden pitchers, filled to the brim with water, wherein place turmeric, mango sprigs and cover it with the lid ;
Place *pān* on *purhar*, and call the priest ;
Make the square with proper rites, call the priest.

---

(6)

Tilak Song.

Sing to (in praise of) Gaṇapati, Gaṇeś, sing to Iśvar, Gopāl.
He[1] is the lord of Sītā, the delighter, not the moon of the world.
He is the lord of Sītā, her lord, the delighter of the family of *Raghu*.
The lord of Ayodhyā, the lord of Ayodhyā, ask and bring him here.
Ahe, the delicate person like Raghunath, like him victorious too.
Sit, O Rām, sit securely, bespangled with diamonds red ;
Have we brought the plate filled with pearls, diamonds, jewels—all red (resplendent).
Ahe, bedaubed with vermilion is the black head (with raven hairs) of the *mālinī*
To her is given a female elephant, decked with a string of tinkling bells.
Gladdened as she moves (she says) "Thanks to thee, O, Ramchandra,
O, further demands the *mālinī*,[2] a silken cloth and vermilion more for the head."

---

(7)

Lagan Song.

Fix the auspicious time for marriage, fix it for (to secure) long life (*i.e.*, to the bridal pair).
Besmear the yard with cowdung and paint the square with pearls (in vermilion).
Place golden pitchers, light the lamps,
For it is Raghunāth's marriage, for long life.
Bring and seat him, the son of Dasrathjī,
Fill (the plate) with heaps of pearls ;
Bring and seat the daughter of Janakjī ;
Paint full the *māṅgiyā* with vermilion ;
For long life in this marriage.
(They) brought and seated the beloved Babu,
Filled (they the plate) with heaps of pearls ;
They brought and seated the beloved girl,
Painted full the *māṅgiyā* with vermilion
For long life in this marriage.

[1] The bridegroom.

[2] She says that she demands.

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(8)

The marriage wreath for the bridegroom.

Proceeding in quest did the female garland-maker enter the city.
"I say in what Rājā's house is there wedding ?
I shall weave wreath to resemble that of *moti* (pearls)."
"Wouldst thou string ? Come, fair *malini* mine,
Here I see the high gate, O malini,
The elephants do fight ; come the horses,
O, horses and elephants do come."
"I shall weave wreath to resemble that of pearl."
"Wouldst thou string ? Come fair *malin* mine."
"Haste thee *malin*, the groom is at the door
O, greatly do we value him ; "
"I shall weave wreath to resemble that of pearls."
Many *lakhs* does the malin set the price on the wreath ;
O, nine (lakhs) more does the grand-father give,
And, O, nine (lakhs) more does the uncle give.

---

(9)

The bridal crown of the bridegroom.

Wearing golden sandals stands the beloved Babu,
And calls loudly, O *māli*, O *mālini*, O mother.[1]
The *māli* was sleeping in the orchard,
And the *mālinī* in the flower garden .
The *mālin* rises and awakens the *māli*,
"Stands at the door the beloved Bābu, O mother."
"Otherdays, O rustic, you never trod this lane ;
How is it that today you stand at the door ?
What has happened to you ; fool, is it *gaḍ gaḍpuā* ?[2]
Or is it the *muḍnā*[3] of your nephew ? "
"O maliniyā, it is not *gaḍ gaḍpuā* happened to me ;
Nor is it the *muḍnā* of my nephew ;
At my house, O māliniyā, has *lagan* begun already ;
And wreathe me the bridal crown (gaj-mor) "
"You cry on, cry on, *gaj gaj*, O beloved ;
But of what other kind can bridal crown be ? "
On the eight corners did the *mālin* weave dangling frills,
And in the middle did she inlay a moon and a sun, O mother ;
Wearing the crown when came out Ramji Babu,
The members of the household were greatly charmed, O mother.
The wayfarers, O beloved, will be pleased on the way ;
And the female drawers of water at the well,
And at the *maḍwā* will be pleased the father of the bride,
And at the foot of the *vedī*, the mother of the bride, O mother ;
And at the *kohbar* will be pleased the sisters of the bride and wives of the bride's brothers.
And the bride herself at the bridal couch :
Blessed is your mother, O beloved, blessed is your father,
In whose womb you are born, O mother.

---

[1] O mother,—the refrain. [2] Have you become a visionary ?
[3] Cuḍā karaṇa (চূড়াকরণ) ceremony.

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When, O mother, I was young (Lit. twelve years of age)
I sported with *pailani*,[1] O mother,
Spinning it round with my feet,
When I ate a little ; rubbed some (the remains) with my feet,
and pushed the rest away with my feet.

---

(10)

Song addressed to Ganpatījī—sung at the time of applying uvaṭana.

Worship we Śrī Ganapatī, Hari Hari,
There decked with the string of treasure looks beautiful the *maṇḍapa* ;
(here) let us apply *uvaṭana*,—Hari !
There smear we the yard with cow-dung,
(here) let us apply *uvaṭana*,—Hari !
There prepare we the square and paint on it the pearls[2] (in vermilion).
(here) let us apply *uvaṭana*, Hari !
Let us bring the golden pitcher and place it as *purhar*[3]
(here) let us apply *uvaṭana*. Hari !
There fill we the jewelled lamps (*i.e.*, with oil) ;
(here) let us apply *uvaṭana*, Hari !
For seat let us bring the golden lion seat—
(here) let us apply *uvaṭana*, Hari !
There bring we Rādhā and Krishṇa and seat them,
(here) let us apply *uvaṭana*, Hari !
Of barley and wheat let us apply *uvaṭana*
(here) let us apply *uvaṭana*, Hari !
There let us mix oil of white mustard ;
(here) let us apply *uvaṭana*, Hari !
Fill we the golden plate with vermilion ;
(here) let us apply *uvaṭana*, Hari !
There five *sohāgin*[4] sing *maṅgal*[5] songs,
(here) let us apply *uvaṭana*, Hari !
Lord Tulsi dāsa sings this *maṅgal* song ;
(here) let us apply *uvaṭana*, Hari !
There taking the mirror see their face ;
(here) let us apply *uvaṭana*, Hari !

---

(11)

Maṇḍapa Song.

Shines the *maṇḍapa* (with the presence of) Rāma and Jānakī,
On the square (*viz.*, the *maṇḍapa*) sit the *samdhi* and the *samadhin*.[6]

---

[1] A small measure of canework or of wood, in which children eat the luncheon.

[2] Pearls supposed to be got from the head of the elephant.

[3] The pitcher is technically so called.

[4] Ladies whose husbands are alive.

[5] Auspicious songs.

[6] The father and the mother of the bridegroom in their relation to the father and the mother of the bride, and *vice versa*, are called *samdhi* and *samdhin* respectively.

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Bustle and hubbub run high at the house of Janak.
The Rājā (Dasarath) leads in the *bārāt* in pompous array,
to where the nectar of the son (the son who is as dear as nectar) is.
The *bārāt* and *sarāt* [1] now join, now separate in whirls,
Shines the *maṇḍap* in their union, of the *keśarī* colour (yellow)
are their turbans and *jāmās*, in their ear-lobes are stuck the pearls,
Dasarath and Janak converse (lit. solace) mutually, "The connection is quite agreeable to both of us."
On the head of Sītā Rāmji applies *sinḍur*.
Thus decked looks she more charming;
Strike the chords (lit. let there be music), go forth the songs in praise of Janaka, ever cry, the shouts of victory (*jai*) in nectared tunes.
Joyous are Rāma and Sītā, let from the spheres of gods shower down the flowers.

---

(12)

Benediction at the time of marriage.

Invocation to Hari (at the time of) application of vermilion,
To Gajādhara of Gayā, and Mādhava of Prayāg (and) to Hara and his consort at Baijnath; let us bring the pair.
O Rāni, [2] be your *ehivāt* [3] for *yugas* [4] and *yugas*.

O Rāni for *yugas* and *yugas*.
Great penance [5] hast thou done O Rāni, O Gaurā-rāni [6]
And hast got Bholānāth for thy husband.

O Rāni, be your *ehivāt* for *yugas* and *yugas*.
O Rāni for *yugas* and *yugas*.

Live Iśvara Mahādeva—*ehivāt* of Gaura-rāni;
O Rāni, be your *ehivāt* for *yugas* and *yugas*
O Rāni for *yugas* and *yugas*.

Great penance hast thou done O Rāni, Rādhā-rāni, *Pyārī* (dear)
And hast got Krishṇa for thy husband.

O Rāni, be your *ehivāt* for *yugas* and *yugas*;
O Rāni for *yugas* and *yugas*.

Live for *yugas* Śrī Krishṇacandraji,
Ehivāt of Rāni Rādhā piyarī.

O Rāni, be your *ehivāt* for *yugas* and *yugas*,
O Rāni for *yugas* and *yugas*.

---

[1] The bride's party who receive the bridegroom's party; the idea is that they meet and go round so that there are ever-forming, ever-breaking groups of the meeting.

[2] The bride.

[3] The married state when husband is alive, lit.—beest thou ever united with thy husband.

[4] Æons.

[5] The reference is to the great *tapas* resorted to by Gaurī, the daughter of Himalayas for getting for her husband Śiva (see Kalidas, *Kumar*-canto V.).

[6] Fair complexioned.

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(13)

Cumānā[1] *Song.*

Shines the wreath on Rāmjī : shines a *tilak*[2] on his forehead,
Let us come, O *Sakhis*,[3] let us come and touch Rāma ;

Shines gold (some small golden earring),
On the ear-lobe of Rāmjī ;

Shines a *tilak* on his forehead.
Let us come, O *Sakhis*, let us touch Rāma,

Let us come, O *Sakhis*, let us touch Sīyājī (Sītājī)
Shines the crown on the head of Rāma ;

On the neck of Sīyā, garland of wild flowers,
Let us come, O *Sakhis*, let us touch Sīyā.

———

(14)

Kohbar Song.

Five betel nuts and twenty-five betel leaves ;
Sits Rāmjī Babu on the bed stead ;
Babu[4] stands with betel and betel leaves.

Babu stands with betel and betel leaves
On the couch sits Sītā Rāni dear ;
Seeing the face (the bride wonders)

"What a (beautiful) face, O Lord, has the carver carved,
What a (beautiful) face, O Lord, has the goldsmith made"[5]

"Undiscerning art thou, O Rāni, undiscerning and without knowledge,
O Dhani[6] no man (no human face) does the goldsmith make."

Walking, walking in the city says the kotwal,
"O Rāmjī Babu, thou hast been summoned to the court of the Rājā."

"My mind is in suspense, my mind is sad,
Leaving such a beautiful girl I won't go to the court."[7]

"[8]If you go to court, you will chew betel nuts and betel,
Mounting and seating on the *chabutrā*[9] you will hear Purāna discourse ;

You will chew (in your mouth) excellent betel and betel nuts.
(Then when the purpose of your summon is told you) you may explain your words (the matter) before the court."

---

[1] Touching the bride or the bridegroom with *dub*, paddy, and turmeric (see *ante*).
[2] *Tilak* mark of sandal wood paste generally worn by persons, between the eyebrows, stretching to the hairs ; here an ornamental decoration of the groom.
[3] Female friends. [4] He stands ; the idea is of service.
[5] In her infatuation.
[6] Address for the bride ; generally a female lover is thus addressed.
[7] Divān—the couch ; the throne, and therefore the court.
[8] Then his wife urges him to go. [9] Platform.

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(15)

Kohbar Song.

In the garden of Kājījī rise the moon and the sun ;
Āre, underneath Rāmjī Babu has spread the couch ;
Āre, there went laughing and playing the beloved Sītā Rāni dear,

Āre, on a sudden the beautiful boy caught hold of her right arm;
" O dear, I won't let thee go to-night,
The night of love is to-night."

" *Āre*, let go, lad, let go, lad, right arm mine,
Āre, will split my chank bracelet, and be sprained my arm.
Āre, the night of love is to-night."

" What is thy chank bracelet made of and of what thy arm ?
Āre, to-night is the night of love,
The night of love.
Āre, to-night I won't let thee fair one, go
The night of love is to-night."

" *Āre*, my *śaṅkhcuḍi* is made of gold, my arm a compound of bone and muscles."

" O dear, I won't let thee go to-night,
To-night is the night of love.
Āre, I shall buy thee *śaṅkhcuḍi*, and get thy (broken) arm joined.
Āre, I won't let the dear one go, to-night,
Āre, I won't let the fair one go to-night."

---

(16)

Kohbar Songs.

Behind the house is the *veli* plant,
There fine flowers have blossomed ;

Those flowers hath Rāmji Babu gone to pluck ;
O mother, how should I pluck the flowers, how should I (pluck) ?

I shall gather the flowers in golden baskets,
O mother, how should I wreathe the wreath ?

Let Rāmji Babu wear the garland,
I shall wreathe it, indeed, with the string of silk.

O mother, how shall I wear the garland ?
O mother wearing (this) I go to father-in-law's house.
" O Ramji Babu, walk slowly, walk slowly."

" O mother, the bride is tender,
O, slender is the bride."

He walked one *kos*, and one *kos* and two ;
" O mother the flower garland falls broken."

The females are drawing water from the well.
O mother, but they do not catch up the flowers (before they fall to the ground).

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"This wreath, thy mother and sister will catch up,
O mother, and will catch up thy bride." [1]

"Mother and sister have I left behind at home, O fair ones,
O mother, and my bride is tender."

---

(17)

Kohbar Song.

"Where have sprung coconut and betel nut ?
O, whence has sprung the betel creeper with the stalk ; O beautiful, spruce (Rāni) !
The beautiful bridegroom is dosing.

From the *marwa* have sprung the coconut and the betel nut,
Āre, from the *kohbar* has sprung the stalked betel, O, *ālbela*, (dear),
The beautiful bridegroom is dosing.

That betel has Ramji Babu eaten,
His thirty-two teeth have gone coloured, O *ālbela*,
The beautiful bridegroom is dosing.

Asks laughing, asks laughing more, the beautiful dear Sītā rānī,
"O Lord, let me see the sheen of thy teeth ;"
The beautiful bridegroom is dosing.

"How should I let thee see the sheen of my teeth, *he* ?
O Rāni, in the *kohbar*, are many mother-in-laws, *ālbela*,"
The beautiful bridegroom is dosing.

"O Lord, have I seen, have I seen the sheen of thy teeth beautiful.
As is the sheen of the beautiful full moon."

Asks laughing, asks more laughing, Rāmji Babu,
"Let me, dear, see the sheen of thy *mañgiyā*,[2] *ālbela*."
The beautiful bridegroom is dosing.

"How should I let thee see the sheen of my *mañgiyā* ?
As thou seest it, will spring thy love."
The beautiful bridegroom is dosing.

"The sheen of thy parted hair, have I seen, have I seen, Rāni,
As is the sheen of the beautiful full moon."
The beautiful bridegroom is dosing.

---

(18)

Kohbar Song.

Numberless are buds beautiful in the garden of *Karṇi* ;
Underneath has spread Rāmji Babu his bed,
There goes laughing and playing the beautiful Sītā dear,
Of a sudden catches the beautiful lad her right arm.

---

[1] This is the abusive retort to the bridegroom made by the female water drawers at the well.

[2] The line on the head showing the parting of the hair.

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"Let go, lad, let go, lad, right arm mine ;
'Oh, my chank bracelet will break, my arm will get sprained."

"If the chank bracelet breaks, my dear,
I will give thee gold bracelet to wear,
O, again, I will have thee made golden bracelet" (*kaṅkaṇa*).

"In the *sabhā* (assembly) you are sitting, Nārāyan Babu, (the father-in-law),
And your son Rāmji Babu has broken my bracelet ;"

"Of what stuff is thy *kāṅgna* made, O bride, and of what stuff thy toys ?
O, with what is embroidered thy good *kāngnā* ?"

"Of gold is good kāngnā mine, O father-in-law, and of silver my toys.
And (pearls) form the embroidery of good *kāṅgnā* mine."

"Let dawn break, O bride, and the markets open,
O, again shall I give thee *kāngna* exactly similar."

"In the assembly sit you, O father-in-law,
In your *mahal* (house) is lost my knife."

"Of what stuff is made your knife, and of what your toys ?
And what was set in your knife ?"

"Of gold was my knife, O *sāheb*, and of silver the handle,
And diamonds were set in my good knife."

"Let the dawn break, O Babu, let the market open,
And exactly similar knife I will give in the hands of the bridegroom."

"If I am the son of Nārāyan Babu,
I will not turn my looks on thee, so priceless was my knife (now lost)."

(Retorts she) "If I am the daughter of Kuldip Babu,
I will not so much as favour thee with a wink (look from the corner of the eye)
So priceless was my bracelet !"

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A Note on a Double Chick Embryo.[1]

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During my embryological class work in this College in the year 1926, I have come across a case of two clearly formed embryos developed within the limits of a single blastoderm. It was the only abnormal embryo found in a batch of eggs (20 in number), which were put together in the incubator. All the others exhibited normal development; the duplicity of the embryo cannot, therefore, be considered as the result of any faulty incubation. A large number of cases of partial or complete duplicity in the development of hen's eggs have already been reported and described, but this case is particularly interesting by reason of its nearly symmetrical orientation and its particular stage of development. I, therefore, take this opportunity of putting this further instance on record.

The egg was incubated for nearly forty hours. The blastoderm with the two embryos was removed in tepid normal saline solution and was fixed in Bouin's fluid. The specimen was later stained with Borax Carmine, differentiated in Acid Alcohol, dehydrated, cleared in Clove Oil and mounted in Canada Balsam. The figure 2 was then drawn with the Camera Lucida, and a Micro-photograph was taken.

DESCRIPTION OF THE SPECIMEN.

The area pellucida was circular and regular, and the two embryos were so placed that their anterior cephalic ends touched each other in the middle line of the area, while their caudal ends diverged towards opposite ends of the area (Fig. 1). The posterior regions of the two bodies were similar to each other in possessing a well formed neural canal (Fig. 2, N.C.), a notochord (Fig. 2, Ntc.), and a series of mesoblastic somites (Fig. 2, M.S.), but the number of the segments differed in the two cases,—the left hand embryo possessed a double row of sixteen somites while the right showed only eighteen. The neural canal was in each case open and the primitive streak

[1] Read before the Fifteenth Session of the Indian Science Congress held at Calcutta, 1928.

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visible (Fig. 1). Each anterior end showed normal features in the swelling out of the Central Nervous System to form the fore-, mid-, and hind-brains (Fig. 2, F.B., M.B., and H.B.). There were well-formed optic vesicles (Fig. 2, O.V.) growing out of the fore-brains but the auditory pits, which are generally seen at this stage, could not easily be distinguished. The two chicks had separate hearts (Fig. 2, Ht.) but the vessels opening into them could not be followed. A single amniotic fold (Fig. 2, Am.) covered the head regions of both the embryos.

The above description shows that no organic fusion of the two embryos had occurred, though very close approximation of the anterior cranial portions had taken place. This leads one to believe that these two embryos were independent of

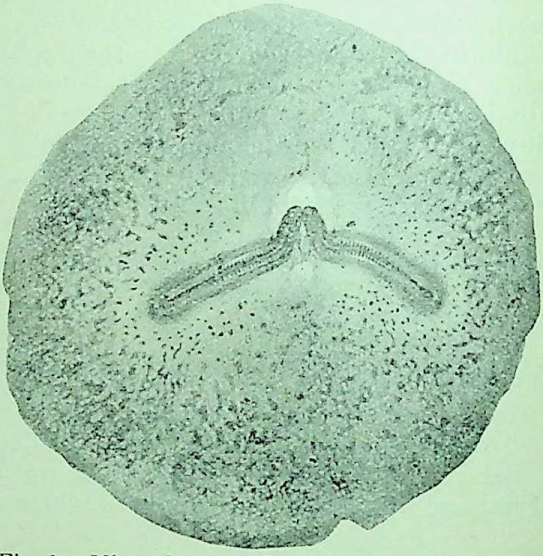

Fig. 1. Microphotograph of the entire Double Chick Embryo × 6

each other. In this respect this instance approaches the cases described by Spencer (12), Kaestner (7*a*), and Bruckhardt (3); other instances have been reported where the double embryos, though independently formed, are oriented differently, as for example the cases reported by O'Donoghue (10) and others. Further, the conditions revealed in the present instance may be called autositic, a term used by Saint Hilaire (13) to denote those conditions in which the two embryos are practically equally developed.

There are numerous teratological theories regarding the malformations of chick or other embryos naturally and artificially produced; but it has been admitted by many that such double monstrosity has arisen from a single ovum by fission,

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as opposed to the rival theory of original duplicity with subsequent fusion. The present case would appear to come under the former category. As to the theories that have been put forward to account for the splitting of the originally single germinal area the irritation theory of Clealand (5) seems the more probable; but in the absence of sufficient data, and especially in view of the fact that the other eggs, incubated along with it and opened on the same day, showed normal development, the exact nature of the irritation responsible for the formation of the double embryo in the present case cannot be indicated.

I am indebted to Lt.-Col. R. B. Seymour Sewell, I.M.S., Director of the Zoological Survey of India, for kindly going through the manuscript.

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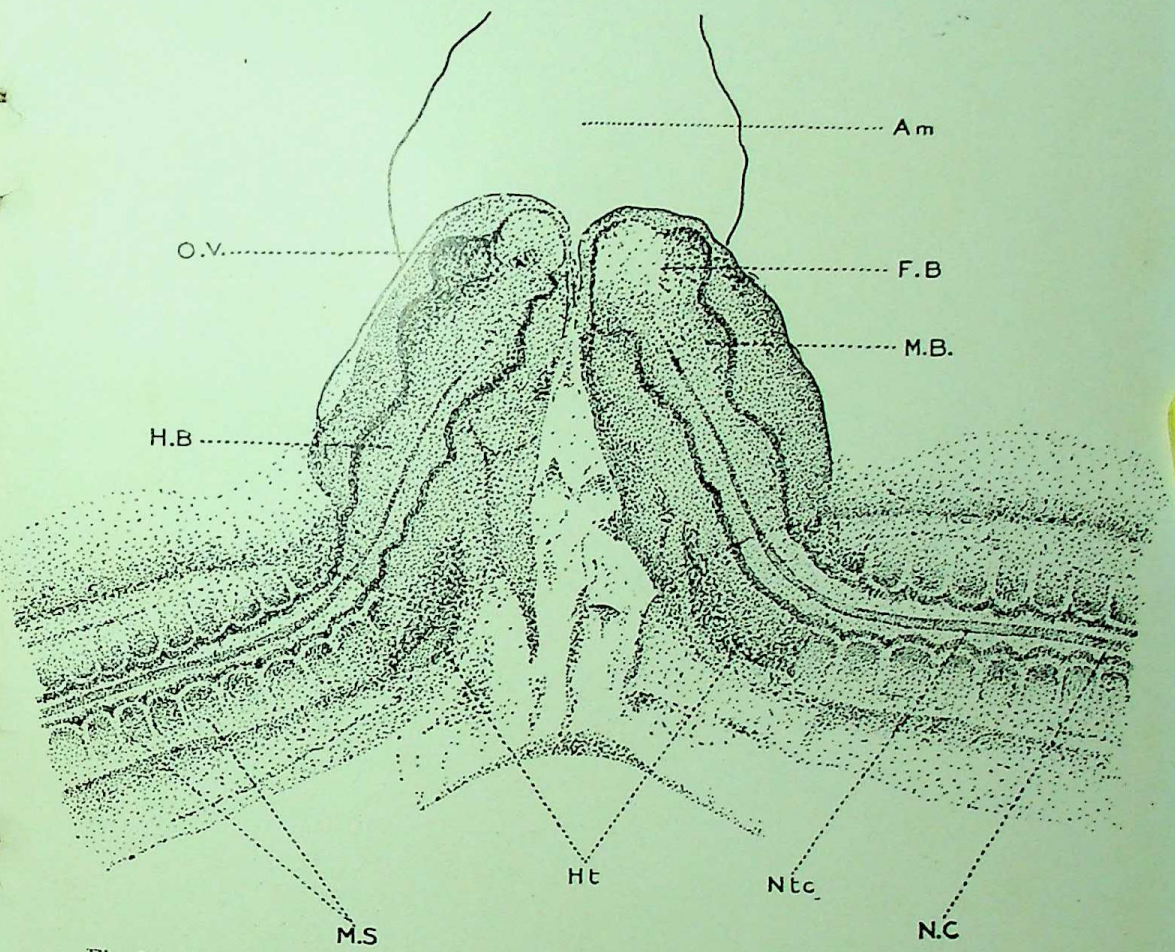

Fig. 2. Anterior portion of the Double Chick Embryo (Camera Lucida drawing) × 30.

Am. .....Amnion.
F.B. .....Fore brain.
H.B. .....Hind brain.
Ht. .....Heart.
M.B. .....Mid brain.
M.S. .....Mesoblastic somites.
N.C. .....Neural canal.
Ntc. .....Notochord.
O.V. .....Optic vesicle.

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Bibliography of Meteorological Papers in the Publications of the Asiatic Society of Bengal.

1788-1928.

BY V. V. SOHONI.

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FOREWORD.

The following pages contain a bibliography of papers of meteorological interest in the publications of the Asiatic Society of Bengal. The publications that were consulted in compiling the lists are—

I.	Asiatic Researches	1788–1836
II.	Gleanings in Science	1829–1831
III.	Journal	1832–1904
IV.	Proceedings	1865–1904
V.	Journal and Proceedings	1905 onwards
VI.	Memoirs	1905 onwards.
VII.	Proceedings of the Indian Science Congress	1914 onwards.

2. The papers seem to reflect, in a way, the history of meteorology in India. In the pioneer days, until 1875, one finds an abundance of papers on meteorological subjects pertaining to various parts of India and adjacent countries. Piddington's historic series of Memoirs on the Law of Storms forms one of the important contributions of these early days. After the constitution of the India Meteorological Department we find a number of papers from the authoritative pen of Mr. H. F. Blanford, the first Director-General of Observatories and for some time an Honorary Secretary of the Asiatic Society. With the transference of the headquarters of the Meteorological Department from Calcutta to Simla, the output in the Society's publications seems to languish, one of the main reasons probably being that the Department commenced to have its own publications.

3. A new era, however, commenced when in 1914 the Indian Science Congress started under the auspices of the Asiatic Society; and since this time one finds again an efflorescence of papers, contributed now to the Indian Science Congress.

4. The first part of this bibliography contains a list of papers arranged in series corresponding to the different publications. In this list the full title of each paper, and author (wherever known) are given with a reference to the original publication in which it appeared. Also, a serial number is assigned to each paper. The parts following comprise an author index, a subject index and a geographical index, containing references to the serial numbers in the first comprehensive list. In many cases spellings, particularly of place names, are not according to current usage; but these have been retained exactly as in the original.

V. V. SOHONI.

THE OBSERVATORY,
ALIPORE, CALCUTTA.
The 4th June, 1928

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List of Meteorological Papers in the Publications of the Asiatic Society of Bengal.

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I. ASIATIC RESEARCHES.

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Meteorological Journal from 1st March 1785 to 28th February 1786 (Calcutta).

2. II, 1790, p. 419. **Trail**, H.
Meteorological Journal 1784-85 (Calcutta).

3. IV, 1795, p. 195. **Balfour**, F.
A treatise on Barometers.

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Observations respecting the remarkable effects of Sol-Lunar Influence in the Fevers of India; with the Scheme of an Astronomical Ephemeris for the purposes of Medicine and Meteorology.

5. IX, 1807, p. 24. **Kater**, Lieut.
Description of a very sensitive Hygrometer.

6. IX, 1807, p. 394. **Kater**, Lieut. T.
Description of an improved Hygrometer.

7. XV, 1825, p. 469. **Gerard**, Lieut. P., *Beng. Nat. Inf.*
Observation on the climate of Subathu and Kotgerh.

8. XV, 1825, p. vii. **Prinsep**, J.
Meteorological Journal (Benares).

9. XV, 1825, p. xiii. **Prinsep**, J.
Description of a Pluviameter and an Evaporometer constructed at Benares.

10. XV, 1825, p. xv. **Prinsep**, G. A.
Abstracted results of marine observations.

II. GLEANINGS IN SCIENCE.

11. I, 1829, p. 28.
Meteorological Summary at Benares.

12. I, 1829, p. 29. **Dulong**, M. M. and **Petit**.
On the Measure of Temperature; and the laws which regulate the communication of Heat (Reprint from "*Journal de L'Ecole Roy, Polytechnique*").

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On the Determination of the Mean Temperature of the Air (*Annal. der. Phys. und Chem.*, 1825, p. 373).

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17. I, 1829, p. 77. D.
On the Hygrometric Scale of the Wet Bulb Thermometer.

18. I, 1829, p. 85. D.
On the Calculation of Heights; determined by Barometrical Measurements.

19. I, 1829, p. 99. Q.
On the velocity of the wind.

20. I, 1829, p. 113. J. A. H.
Woollaston's Thermometrical Barometer.

21. I, 1829, p. 114. G.
Notice of a storm which occurred at Rewah in February 1823.

22. I, 1829, p. 189. D.
On Hygrometry, No. 2.

23. I, 1829, p. 201. Q.
Remarks on Adie's Sympiesometer.

24. I, 1829, p. 271. H.
On the scale of Temperature.

25. I, 1829, p. 309. D.
Daniel's Hygrometer.

26. I, 1829, p. 313. D.
On the most eligible form for the construction of a Portable Barometer

27. I, 1829, p. 340. C.
Table of Comparative Tensions of Aqueous Vapour.

28. I, 1829, p. 341. L.
Notice of a whirlwind.

29. I, 1829, p. 359. **Dulong,** M. M. and **Petit.**
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33. II, 1830, pp. 126, 245 and 283. P. G.
On the climate of northwestern mountains.

34. II, 1830, p. 131. D. G. J.
On the temperature of wells.

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41. II, 1830, p. 278. **Dulong,** M. M. and **Petit.**
On the Measure of Temperature; and the laws which regulate the communication of Heat. On the specific heat of solids at different temperatures.

42. II, 1830, p. 286, R. S.
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43. II, 1830, p. 290. W. F.
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On the Errors of Thermometers and on a correct method of Graduation.

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Barometrical Altitudes.

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Register of Rain fallen at Sagar, C. India.

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Summary of Meteorological Observations made at the Surveyor-General's Office in Calcutta during the years 1829-30-31.

56. I, 1832, p. 73.
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57. I, 1832, p. 73.
Range of the Barometer at Berhampore.

58. I, 1832, p. 74.
Hourly observations of the Barometer in the Fortress Cavite.

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On the temperature and saltness of the river Hughli, from Calcutta to the Sea.

60. I, 1832, p. 154. **MacRitchie,** J.
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61. I, 1832, p. 297.
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Meteorological Averages at Canton and Macao.

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64. I, 1832, p. 477.
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65. II, 1833, p. 128. **Oliver,** Major T.
Abstracts of observations of the Temperature, Pressure and Hygrometrical state of the air at Nasirabad.

66. II, 1833, p. 239. **Geddes,** W., Surgeon, Mad. Eur. Reg.
On the climate of Nagpur.

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Description of a Compensation Barometer and Observations on wet Barometers.

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Meteorological table kept at Bancura for the year 1832.

70. II, 1833, p. 427. **Prinsep,** James.
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Climate of Singapur.

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Additional note on the climate of Nagpur.

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Abstract of a Meteorological Journal kept at Kotgarh (Lat. 31° 11′ 45″ N., Long. 77° 27′ 49″ E.), Subathu, and the intermediate places in the Himalaya Mountains for 1819-20.

74. II, 1833, p. 641. **Boulderson,** H. S.
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81. III, 1834, p. 345. **Everest,** Rev. R.
On the influence of the moon on atmospherical phenomena.

82. III, 1834, p. 366.
Note on the Temperature of Wells at Nahen.

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83. III, 1834, p. 631. **Everest,** Rev. R.
Further Notice of the influence of the moon on atmospherical phenomena.

84. III, 1834, p. 650.
Climate of the Nilgiris.

85. III, 1834, p. 655.
Note regarding temperature of wells.

86. IV, 1835, p. 48. **Oliver,** Lt.-Col. Thomas.
Abstract of Meteorological observation at Nasirabad.

87. IV, 1835, p. 59.
Explanation of the differences in the quantity of rain at different elevations.

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On the amount of rainfall at Calcutta, as affected by the Declination of the Moon.

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On the temperature of deep wells to the west of the Jamna.

90. IV, 1835, p. 230. **Boulderson,** S. M.
Abstract of a Meteorological Register kept at "Caineville" (Masuri).

91. IV, 1835, p. 252. **Everest,** Rev. R.
Comparison of the Heights of the Barometer, with the distance of the Moon from the Celestial Equator.

92. IV, 1835, p. 405. **Edgeworth,** M. P.
Register of the Thermometer at Ambala, for 1834.

93. IV, 1835, p. 358.
Proposed Meteorological combination in Southern Africa.

94. IV, 1835, p. 405. **Lamb,** G. W.
Register of the fall of rain, in inches, at Dacca, from 1827-1834.

95. IV, 1835, p. 525. **Marcet,** F.
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96. IV, 1835, p. 514. **Prinsep,** J.
Horary Meteorological observation made at Calcutta on the 21st-22nd September.

97. IV, 1835, p. 709. **Ord,** Captain R.E.
Extracts from a Meteorological Journal, kept at Kandy, Ceylon.

98. IV, 1835, p. 715. **Geoffroy,** L.
Range of the Barometer and Thermometer, at Port Louis, Mauritius, in 1828.

99. IV, 1835, pp. 64, 120, 184, 240, 296 and 360.
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100. IV, 1835, pp. 412, 476, 532, 588, 652 and 716.
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101. V, 1836, p. 239. **Brownlow,** C.
Note on the occasional existence of fresh-water on the surface of the Ocean.

102. V, 1836, pp. 51 and 243. **Barrow,** H.
Horary Observations of the Barometer, Thermometer and Wet bulb Thermometer, made at Calcutta on the 21st and 22nd of December, 1835 and on the 21st and 22nd March 1836.

103. V, 1836, p. 255. **Robertson,** M.
The ascent of 1st balloon from Bengal on 21st March.

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104. V, 1836, p. 281. **Everest**, Rev. R.
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105. V, 1836, p. 296. **Mouat**, Dr. J.
Meteorological Register kept at Bangalore.

106. V, 1836, p. 298. **Mouat**, Dr. J.
Meteorological observations taken every hour at Bangalore in the Hospital of H.M., 13th Dragoons from 6 a.m. of the 21st to 6 p.m. of the 22nd March, 1836 inclusive in conformity with Sir J. Herschel's instructions.

107. V, 1836, p. 299. **Colvin**, Col., **Baker**, Lieut., and **Durand**, Lieut.
Horary observations taken at Dadupur, in conformity with Sir John Herschel's circular.

108. V, 1836, p. 585. **Everest**, Rev. R.
Continuation of a paper (Journal, May, 1835) on the Heights of the Barometer as affected by the position of the moon.

109. V, 1836, pp. 396 and 828. **Prinsep**, J.
Experimental Researches on the Depressions of the Wet bulb Hygrometer.

110. V, 1836, p. 816. **Prinsep**, J.
A comparative view of the daily range of the Barometer in different parts of India.

111. V, 1836, pp. 60, 128, 192, 256, 320, 376, 440, 520, 600, 684, 760, and 836.
Meteorological Registers for January to December.

112. VI, Pt. I, 1837, pp. 80, 160, 245, 324, 404, and 500.
Meteorological Registers for January to June.

113. VI, Pt. I, 1837, p. 303. **Everest**, Rev. R.
On the Revolution of the Seasons.

114. VI, Pt. I, 1837, p. 308
Climate of Darjeeling.

115. VI, Pt. II, 1837, p. 610. **Campbell**, A., *M.M., Nepal Residency.*
Abstract of a Meteorological Register kept at the Cathmandu Residency for 1837.

116. VI, Pt. II, 1837, p. 618.
Proportion of rain for, different lunar periods at Kandy, Island of Ceylon.

117. VI, Pt. II, 1837, p. 619.
Memo. of the fall of Barometer at Macao during the severe Hurricane, on the 5th and 6th August, 1835.

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Barometrical elevations taken on a journey from Catmandhu to Gosainsthan, a place of pilgrimage in the mountains of Nipal.

119. VI, Pt. II, 1837, pp. 700, 888. **Chapman**, Dr. H.
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Abstract of Meteorological Register kept at Cathmandu for July and August, 1837.

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122. VII, Pt. I, 1838, p. 83. **Campbell, A.**
Abstract of a Meteorological Register kept at the Cathmandu Residency for September, 1837.

123. VII, Pt. I, 1838, p. 84.
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124. VII, Pt. I, 1838, p. 192. **Everest, Rev. R.**
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125. VII, Pt. I, 1838, p. 422. **Floyd, J.** (communicated by J. H. **Patton** Magistrate of the 24-Parganas.)
Account of the Hurricane or Whirlwind of the 8th April, 1838.

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128. VIII, 1839, p. 313. **Everest, Rev. R.**
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129. VIII, 1839, p. 495.
Mr. Middleton on the Meteors of August 10, 1839.

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133. IX, Pt. I, 1840, pp. 95, 217.
Meteorological Tables, April and May, 1840.

134. IX, Pt. I, 1840, p. 277. **O'Shaughnessy, W. B.**
Official correspondence on the attaching of Lightning Conductors to Powder Magazines—Communicated by permission of Government.

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Remarks on the Construction of Newman's improved Portable Barometer, and on the mode of renewing the Gauge Point when lost.

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Observations of Meteors, on the night between the 12th and 13th November 1841, made at the Magnetic Observatory at Simla.

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A Fifth Memoir with reference to the Theory of the Law of Storms in India, being researches about the Madras Storms of May 16th 1841, and an account of a whirlwind experienced by the French ship "Paquebot des Mers du sud," Capt. P. Saliz off the Cape.

141. XI, Pt. I, 1842, p. 49. **Grifith**, Dr.
Tables of Barometrical and Thermometrical observations made in Affghanistan, Upper Scindi and Kutch Gundava during the years 1839-40.

142. XI, Pt. I, 1842, p. 211. **Trotter**, Robert.
Notes regarding the Meteorology and climate of the Cape of Good Hope.

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Meteors observed at Allahabad on the 10th August 1842.

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Barometrical observations taken to ascertain the Altitude of the station of Purulia, Ramghur district.

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148. XII, Pt. I, 1843, p. 298. **Shortrede**, Capt. R.
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Social organisation of the Śātakarṇis and Śuṅgas.

By K. P. CHATTOPADHYAYA.

1. The dynastic lists of the Andhra kings who ousted and replaced the Kaṇva rulers (and whatever was left of the Śuṅga kings) varies in the Purāṇas.[1] The three early Purāṇas, Matsya, Vāyu and Brahmāṇḍa while agreeing in many particulars differ on some very important points. Thus the Vāyu and the Brahmāṇḍa give a much shorter list, the former naming 17-19 kings, (one MSS only, the so-called "e" Vāyu of Pargiter naming 25), the latter seventeen. The Matsya on the other hand name these as also numerous other kings, five MSS. actually naming thirty kings. The summary at the end of this dynastic list in Vāyu and Brahmāṇḍa say that there were thirty kings who ruled for 411 and 456 years respectively (P33 N33). With this the Matsya agrees in so far as the total regnal period is said to be 460 years. The total number of kings is said to be ekonaviṁśati but this is probably a misreading of ekonatriṁśati owing to a possible confusion of t and v in Prakrit (the original language of composition) in Kharosthi (Pxxiii 39 and xxvi N3). Clear instances of this misreading are found in the account of this same dynasty in the regnal year of Yajñaśrī in Vāyu and Brahmāṇḍa and in the passage relating to astronomical particulars (P57 N4).

The list of kings in the Matsya Purāṇa (full 30) arranged in the order about which all the Purāṇas agree (except a few MSS.), is as follows:—

	Name.	Regnal period.		Name.	Regnal period.
1.	Simuka	23	11.	Skandasvāti	7
2.	Kṛṣṇa	10[2]	12.	Mṛgendra	3
3.	Śrī-Śātakarṇi	10	13.	Kuntala	8
4.	Pūrṇotsaṅga	18	14.	Svātikarṇa (correcting an obvious misreading).	1
5.	Skandhastambhi	18			
6.	Śātakarṇi	56			
7.	Lambodara	18	15.	Pulomāvi	36
8.	Āpīlaka	12	16.	Ariṣṭakarṇa	25
9.	Meghasvāti	18	17.	Hāla	5
10.	Svāti	18	18.	Mantalaka	5

[1] The Pauranic account is taken from Pargiter's comparative "Purāṇa Text of the Dynasties of the Kali age" (1913), except where otherwise indicated. Reference to Pargiter's book will in future be given like P17 N3 (page 17, note 3).

[2] Pargiter, *ibid.* Introduction, §40 for misreading of abdān daśa as aṣṭādaśa.

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	Name.	Regnal period.		Name.	Regnal period.
19.	Purīndrasena	21	25.	Śivaśrī Pulomā	7
20.	Sundara Śātakarṇi	1	26.	Śivaskandha	31
21.	Cakora	½ year	27.	Yajñaśrī	29
22.	Śivasvāti	28	28.	Vijaya	6
23.	Gautamīputra	21	29.	Caṇḍaśrī	10
24.	Pulomā	28	30.	Pulomāvi	7

The Vāyu usually names 1-3, 6, 8, 15-23, 27-30.[2] A number of manuscripts however leave out No. 21. The Brahmāṇḍa, names 1-3, 6, 8, 15-20, 22-23, 27-30.

The less accurate and later Purāṇas, Viṣṇu and Bhāgavata give the following lists :—

Viṣṇu	..	.. 1-4, 6-9, 15-30
Bhāgavata	..	.. 1-4, 7-9, 15-20

The regnal periods given, also differ from Matsya in the case of 3, 15, 17, 27 and 29 in the Vāyu and Brahmāṇḍa Purāṇas. In the case of No. 3, Vāyu and Brahmāṇḍa merely state that the son of Kṛṣṇa was a great king and pass on to No. 6. The regnal periods of the kings numbered 15, 17, and 29 are given as 24, 1, and 3 respectively, in place of 36, 5, and 10 of the Matsya.[3]

From internal evidence, the Matsya appears to have been taken from the Bhaviṣya Purāṇa as it existed about the middle of the third century A.C. The Bhaviṣya account was later extended to the beginning of the Gupta rule and also revised to some extent. This version seems to have been borrowed by the Vāyu and Brahmāṇḍa. The other Purāṇas seem to have incorporated the dynastic lists later and are not reliable except in so far as they seem to corroborate the above three Purāṇas. (Pxxvii 44–51.)

2. It is evident that all three Purāṇas—Matsya, Vāyu and Brahmāṇḍa represent tradition current at the period immediately following the time of the Andhras. The discrepancies in the revised texts are however so great that it cannot be due to any oversight or slip on the part of the editors. Unless we are prepared to reject the whole Pauranic account as utterly untrustworthy—an easy solution of a difficult problem—we have to examine the Purāṇas themselves to see if they throw any light on this discrepancy.

Let us first of all examine the accounts common to all three Purāṇas. The kings named in the later text are all found in the earlier text. The total of the number of kings stated

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[1] P. 42, Note 7; and Appendix I, § iii. That the reading should have "tayo" (=trayah) appears to be almost certain as otherwise "samah" would have no meaning.

[2] Although on page 36 Pargiter states that Vāyu mentions 6-8, note 43 of page 39, makes it clear that this is not the fact and that only 6 and 8 are given.

[3] See page 6 for Nos. 2, 3, and 27.

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in the revised text is the same as actually found in the complete Matsya list.[1] Also the total of the regnal periods of the Vāyu agrees closely with the total of the reigns of the kings named in the Purāṇa plus the regnal period of kings occurring only in the Matsya (neglecting the corrupt text of the e Vāyu MSS.). At the same time, the revised texts expunge no less than 12 (Vāyu)—13 (Brahmāṇḍa) names leaving 18-17 kings with a total rule of 262½ to 262 years. The inference is that the later editors admitted that there were really thirty kings as named in the Matsya, with a total rule of over four centuries, but at the same time a large number of the kings did not have any place in the dynastic succession recorded.

As some of the kings mentioned in the Matsya stand in the relation of son to the kings shown in the Vāyu and Brahmāṇḍa texts, it is evident that the kings excluded from the revised version were not of another dynasty constituting successors or predecessors, as a whole, to the royal line given in the later text. The internal evidence of the two versions therefore indicate that we are dealing with two sets of kings, only one of whom was however considered by the revising authorities to possess the privilege of having the names preserved in the Purāṇas.

The question arises as to why, in that case, an extra set of kings were incorporated in the earlier account. This involves the question as to why certain lists are preserved in the Purāṇas in so much detail, others obtaining only a bare mention of totals. The principal lists (showing detail) given in the Purāṇas, themselves indicate the reason. A number of kings of the Paurava, Ikṣāku, Bārhadratha, and Śaiśunāga lines are mentioned as having ruled the earth (P4-22). In the case of the two earlier dynasties, the accounts end in each case with the statement "In this connection the genealogical verse was sung by ancient brahmans, etc." (P66, 67. Text P8, 12). The later dynasties of Maurya, Śuṅga and Andhra kings are known to have been sovereign powers—and in the case of the two latter dynasties, some of the members are known to have performed the Rājasūya ceremony with success. The principal dynastic lists thus appear to have been drawn up showing the genealogy and succession of sovereign kings and recited on their ceremonial investiture as lords paramount.

We are therefore led to conclude that the kings retained in the revised list satisfied the above conditions while those excluded, did not. The fact that the names expunged are included in the earlier version, however, points to the fact that one at least of the three conditions—genealogical con-

[1] The triṁśati of Brahmāṇḍa cannot be taken as misreading for viṁśati as the number is below 20 definitely.

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nection, succession and paramount position must have been satisfied by these kings, in common with the rulers retained. If it were the condition of sovereignty, then they[1] would have found a place in the revised text separately besides the kings shown in that version. Apart from the above condition, the contemporary character of the Q rulers with the R rulers stand in the way of the above common factor. The same factor rules out the possibility of succession as the common factor. Further as the Q rulers are strewn among the whole list in the Matsya along with R rulers, the lack of paramount power on their part would not have led to their wholesale exclusion from the Purāṇas—even from a summary list. For the whole Paurāṇic account, although written from the point of view of the Magadha kingdoms (Px. 13) mentions the contemporary Pauravas and Ikṣākus, both of which lines (according to the Purāṇas) produced paramount kings along with the Bārhadrathas.

The third and remaining factor—of genealogical connection would seem at first sight to be equally incompatible. For, to the Brahman compilers of the Purāṇas, genealogy meant descent from father to son and so on, in the male line. Hence, as the rulers were all males, succession would appear also to be patrilineal and to coincide with descent. Therefore the exclusion of the former as a common factor would appear to exclude the latter as the possible link. This is not however the case. Ethnologists are familiar with the fact that descent or genealogical relationship may be counted through the mother as well as the father. Succession (transmission of rank or other similar social distinction) also may follow either of the lines and the two, descent and succession do not even always go together.[2]

3. The exclusion of royal succession as the common factor therefore does not rule out genealogical connection as the possible connecting bond. Before however we can conclude that genealogical connection is indeed the determining factor, we have to consider an alternative view suggested by Sir R. G.

---

[1] The Rulers whose names were expunged in the later text will be referred to as Q Rulers for convenience. The others will be shown as R Rulers.

[2] The best example of descent and succession following different lines are found in Melanesia. W. H. R. Rivers, *History of Melanesian Society*, Vol. I.

Codrington, "*The Melanesians, their anthropology and folklore.*"

I have considered it necessary to draw the attention to this point in detail to point out that although the Purāṇas mean by genealogy, patrilineal descent, the actual mode current among Śātakarṇis may have been different. Further, even if the actual mode of descent were patrilineal, the succession might follow a different rule. The Melanesian examples referred to illustrate patrilineal succession combined with matrilineal descent.

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Bhandarkar.[1] According to him, the smaller number of kings with a total of 272½ (?) years, given in the Vāyu Purāṇa refers to the main dynasty, with the royal seat at Dhanakakata. The additional names and periods found in the Matsya are referred to younger princes of the family who ruled at different places but more often at Paiṭhan than elsewhere. "When the throne became vacant, the Paiṭhan princes succeeded. But some probably died before their elders and never became kings of Dhanakakata" (RB 33). This suggestion of Sir R. G. Bhandarkar is based on—

(1) The discrepancy between the Matsya and Vāyu accounts in the number of kings as also regnal periods.
(2) The existence of more than one line of Śātakarṇi kings ruling in different parts of the peninsula.
(3) The reference in Ptolemy's geography[2] to Pulumāvi as ruler of Paiṭhan and to one Baleokuros ruler at Hippokura in the south—coupled with the finds of the coins of Gotamīputra Vilivāyakura and Vāśiṣṭhīputra Vilivāyakura at Kolhapur[3]
(4) Gotamīputra ruled at Dhanakakata while his son Pulumāvi ruled at Paiṭhan.

Regarding the third point, discussion is not necessary here as the statements in Ptolemy nor the coin legends show that the Vilivāyakuras were Śātakarṇis of the main line. These will be considered in their proper place.

The second and fourth arguments in support of Sir R. G. Bhandarkar's hypothesis are based on inscriptions.[4] But the rulers mentioned in the Banavāsi inscriptions cannot be shown to have been contemporary with so called Paiṭhan rulers and those of the main line or to have found a place in the Matsya list. The statement that Pulamāvi ruled at one place and Gotamīputra at another[5] does not prove anything beyond the fact that the father and the son ruled contemporaneously as kings at different places.

---

[1] Sir R. G. Bhandarkar, "*Early history of the Deccan.*" Bombay, 1895. References to this work will in future be given as RB 36 (Sir R. G. Bhandarkar, *ibid.*, p. 36).

[2] J. W. McCrindle, *Ancient India as described by Ptolemy*, 1885. The actual mention is of Baithana as the royal seat of Siro Polemaios and of Hippokura as the royal seat of Baleokuros (p. 175).

[3] *Journal of the Bombay branch of the Royal Asiatic Society*, Vol. XIII. p. 305, Vol. XIV, pp. 153-54.
E. J. Rapson, *Catalogue of the coins of the Andhra dynasty, etc.* Kolhapur Nos. 13—21, 47—51, etc.
In future Rapson's catalogue will be referred to as BMC. No., etc.

[4] *Epigraphica Indica*, Vol. X, Lüders' list No. 1021 and 1195 (Kānheri Buddhist cave inscription and Malavalli pillar inscription).

[5] On the strength of the interpretation given by him to the phrases in which Dhanakakata and Navanara occur in the inscriptions numbered 1125 and 1124 respectively in Lüders' list.

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A very strong piece of evidence against Sir R. G. Bhandarkar's views is based on the law of chances or probability. As any Life Insurance Company will certify, and as common experience bears out, the chances of an adult son surviving his father are on an average much greater than the reverse (of the father surviving his grown up son). On Sir R. G. Bhandarkar's view, the 17 kings in the Vāyu list would represent princes who outlived their fathers, after having ruled earlier (certainly not before attaining adult age) at Paiṭhan. The thirteen names left out and found only in the Matsya stand for princes who did not survive the fathers but merely ruled at Paiṭhan.

The above figures mean that on Sir R. G. Bhandarkar's view it is necessary that only in four cases out of seven could an adult prince—with an average rule of 13 years at Paiṭhan—survive his father (the average rule of the main line being 16 years).

At first sight it might appear that the discrepancies in the actual regnal periods of certain kings (*e.g.* Nos. 2, 3, 15, 17, 27, 29) in the two versions are in favour of Sir R. G. Bhandarkar's view. For, the Matsya list might be held as giving the regnal periods at Paiṭhan plus those at the principal seat. The corrections in the Vāyu would then stand for deductions for the rule at Paiṭhan, to get the balance representing the rule at the chief seat of Government. But the regnal periods of every king common to the two versions, should, on this view, differ in the two lists. Actually however, only three[1] out of seventeen really show such discrepancy. The corrections in the later version do not therefore require an assumption of the kind made by Sir R. G. Bhandarkar. They are in fact against it inasmuch as the careful revision of the text has resulted only in three corrections—which are within the bounds of mistake in the earlier text—instead of a wholesale revision expected on Sir R. G. Bhandarkar's view (unless we treat the regnal periods given in the Matsya as excluding Paiṭhan rule which would however render the inclusion of the Paiṭhan rulers quite meaningless).

Another piece of evidence of very great weight against the hypothesis of Sir R. G. Bhandarkar is that the name of Pulumāvi, son of the famous Gotamīputra does not occur in the Vāyu and Brahmāṇḍa lists. Pulumāvi is known to have ruled at Paiṭhan[2] and was lord of Dakṣiṇāpatha and

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[1] Although the number is apparently six, we cannot class Nos. 2, 3, and 27 with the rest as in the case of 2 and 27 the regnal periods appear to differ owing to obvious misreadings. No. 3 is mentioned as a great king without any regnal period,—which is different from a discrepancy in actual periods.

[2] The reference to Paiṭhan as the royal seat of Pulumāvi

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outlived his father.[1] Sir R. G. Bhandarkar has actually assigned 4 years to Pulumāvi as the period of his rule at the principal seat of the dynasty (RB 34). As Pulumāvi's name was known in distant Egypt, the nonoccurrence of his name in the Vāyu and Brahmāṇḍa lists cannot be due to ignorance or carelessness of editors who had the earlier version before them (as the concluding verses show). We are therefore compelled to conclude that Pulumāvi did not succeed his father Gotamīputra although he outlived the latter and was lord of Dakṣiṇāpatha at that time.

4. We may now return to the possibility, noted previously that the connection between the two sets of kings was genealogical, but that the succession did not coincide with the mode of descent. It is neccessary, for this purpose to examine the available evidence to determine the actual mode of succession as well as the genealogical relationship recorded, bearing in mind that the two are different things and that the latter was probably patrilineal, this being the meaning attached to genealogy by Brahmanic writers of the Purāṇas.

If the Vāyu and Brahmāṇḍa lists are consulted for the successor of Gotamīputra, the father of Pulumāvi, we find the name of Yajñaśrī. On a reference to inscriptions and coins, it is found that this king, like the father of Pulumāvi, is styled Gotamīputra.[2] Being a Gotamīputra, Yajñaśrī may of course be a younger brother of his predecessor. But the Purāṇas mention no such relationship—although in the case of an early king like Kṛṣṇa, the second of the line, this relationship to Simuka is noted. As Yajñaśrī was a powerful sovereign[3] and part of the compilation of the dyanastic list seems to have begun in his time[4] indifference or ignorance have to be ruled out and we have to conclude that the relationship to Pulumāvi's father was not of a brother. To elucidate the nature of the succession, we have to look for a very near relative (close enough to displace a son) other than a younger brother, and who can yet be a Gotamīputra.

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in Ptolemy's work certainly establishes this, although it may not give his date.

[1] Lüders' list Nos. 1123 and 1124.

See Appendix A, for a full discussion of this series of inscriptions, of Pulumāvi, his father, his mother and his father's mother.

[2] Inscriptions: Lüders' list Nos. 987 and 1024 (Kāṇheri) 1146 (Nāsik), 1340 (Chīna).

Coins: Sopara coin of Yajñaśrī vide *J.B.B.R.A.S.*, Vol. XV; Andhradeśa, BMC Nos. 135–38, 40, 149, 154, 157, 161; Chanda district, BMC Nos. 165–168, 170.

[3] The wide distribution of the coins and the inscription leave no doubt of the extent of his kingdom.

[4] The Bhaviṣya Purāṇa was much older and some compilation may have been made at the time of the Paurava, Aikṣāku and Bārhadratha kings. See Pargiter, XXVII, 49, and note 1 re 11.

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For this purpose it is necessary to ascertain the exact significance of the term Gotamīputra from contemporary documents of the same area as was ruled over by these kings.[1]

In the Nasik inscription of the 19th year of Pulumāvi, the mother of Gotamīputra is termed Gotamī Bālasiri.[2] Gotamī is therefore part of the name of the mother of the royal Gotamīputra (and grandmother of king Pulumāvi). Pulumāvi styles himself Vāśiṣṭhīputra. Therefore Vāśiṣṭhī is a part of his mother's name. This of course agrees with the grammatical derivations of the words Vāśiṣṭhīputra and Gotamīputra.

The Śātakarṇi Śātavāhana kings known from inscriptions and mentioned in the Purāṇas are :—

I. Simuka (No. 1) the founder of the line.[3]
II. Kṛṣṇa (No. 2) the brother of Simuka.[4]
III. Śri Śātakarṇi (No. 3) the son of Kṛṣṇa.[5]
IV. Gotamīputra Śātakarṇi (No. 23).[6]
V. Vāśiṣṭhīputra Pulumāvi (No. 24).[7]
VI. Gotamīputra Yajñaśrī (No. 27).[8]
VII. Vāśiṣṭhīputra Caṇḍaśrī (No. 29).[9]

In addition there are inscriptions of King Vāśiṣṭhīputra Chatarpana[10] and king Hārītīputra Śātakarṇi.[11]

Two other rulers whose inscriptions have been found and who have been ascribed to this dynasty are Maḍhariputra Sakasena (or sata)[12] and Śri Śivamakasada.[13]

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[1] For in the case of records in other areas and of other lines we cannot be sure whether the evidence is applicable to this particular case.

[2] Lüders' list No. 1123, *Archæological Survey of Western India*, Vol. IV, Nasik No. 18, line No. 9 of the inscription.

[3] Lüders' list No. 1113, Nanaghat cave inscription.

[4] Lüders' list No. 1144, and *Senart in Epigraphica Indica*, Vol. VIII.

[5] Lüders' list No. 1114, and 346. A certain amount of difficulty would appear to be caused by the omission of Kṛṣṇa's name in the Nānāghat cave inscription. The mention of Simuka's name and inclusion of his image would point to this king as the father of Śri Sātakarni. The difficulty disappears if we take the term "putra" used in the Purāṇas in a classificatory sense—extended to sons of brothers, just as "tāta" is used for the father and his brothers.

[6] Lüders' list No. 1125 and 1105 (for 1126 see Appendix A).

[7] Lüders' list No. 1142, 1122, 1100, 1123, 1124, 1106, 1248 and Myakdoni inscription.

[8] See before.

[9] Lüders' list No. 1341.

[10] Bhagwanlal Indraji: *J.B.B.R.A.S.*, Vol. XV, p. 313 (Nanaghat cistern inscription).

[11] Lüders' list No. 1195 and probably 1021.

[12] *Ibid.*, Nos. 1001 and 1002. For the latter part of the name see later.

[13] *Ibid.*, No. 1279 (Amarāvati).

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The coins of the kings so far found[1] are of the following kings:—

Śri Śāta
Śri Śātakarṇi } Probably the same king and same as No. 3 (BMC No. 1, 2, 9 Western India).

Gotamīputra Śātakarṇi (BMC 253–8 restruck coins of Nahapana).

Vāśiṣṭhīputra Pulumāvi (BMC 88–93—All areas).

Gotamīputra Yaj̃ñaśrī Śātakarṇi (previously given).

Vāśiṣṭhīputra Caṇḍa Śātakarṇi (BMC 117–25, 127, 129–31).

Vāśiṣṭhīputra Śivaśrī Śātakarṇi (BMC 115=16) (No. 26 of Paurānic list).

Coins of other Śātakarṇis (mentioned or recognisable as such) are also found, as of Rudra Śātakarṇi[2] or of a later Kṛṣṇa Śātakarṇi.[3] These however do not bear the legend raño (of the king) nor is there any prefix mentioning the name of the mother. As previously indicated there is another class of coins found at Kolhapur which bear the legend raño and also the epithets Gotamīputra etc. The coin legends are:—

Raño Vasiṭhiputasa Vilivāyakurasa—(Vāśiṣṭhīputrasya);
R. Gotamiputasa Vilivāyakurasa; and
R. Māḍhariputra Sivalakurasa.

5. Leaving out for the present, the case of the Māḍhariputra Sakasena (or Sata) and the kings of the Kolhapur coins and confining ourselves to kings whose names can be identified with certainty in the Pauranic lists, we find that a number of kings bear the name of Gotamīputra and Vāśiṣṭhīputra. This makes it doubtful if Gotamī, Vāśiṣṭhī are really proper names. The name of the royal mother of the Śātakarṇi king of Banavāsi is Hārītī. The Kadamba king who confirmed the grant of this ruler and who from the evidence of his own inscription[4] followed the above Sātakarṇi by some length of time also styles himself Hārītīputra. This is also found in the inscription of the Chālukya kings.[5] As we have seen there were other contemporary kings who also styled themselves as sons of Gotamī, Māḍhari and Vāśiṣṭhī[6]. It may

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[1] For convenience references have been given only to Rapson's Catalogue.

[2] Rapson, BMC No. 179, and Pl. VII to pp. 2–4. [3] *Ibid.*

[4] Lüders' list No. 1196. *Malavalli pillar inscription of Hārītīputra Śivaskandhavarman, of mānavyāsa gotra, king of the Kadambas, Epigraphica, Carnatica,* Vol. VII, Shikarpur Taluq inscription No. 264. *Talgunda pillar inscription of Harītīputra Kakutsthavarman etc. Ep. Car.,* Vol. VII, SK., No. 176.

[5] *Ep. Car.,* Vol. VIII, *Sorab Taluq inscription* No. 571.

[6] In questions on social organisation and custom, the term con-

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therefore be concluded that these do not represent the proper names of the royal mothers but something else which is common to the general groups of queen mothers (Vāśiṣṭhi, Hārītī, etc.).

To determine this common factor, we have to examine the evidence of other inscriptions of near about this period and of this locality. Almost all the relevant inscriptions will be found summarised in Lüders' list of Southern Brahmi inscriptions. For convenience references will be given to this list with the number of the inscription (as L 105, etc.), original sources being quoted only where necessary. The inscriptions which contain a similar mention of the mother's name as in the case of the Śātakarṇi kings (other than those previously noted) are as follows :—

Vāśiṣṭhiputra Ānaṁda, the foreman of the artisans (avesanin) of the king Śri Śātakarṇi (L 346).[1]

Mahābhoja Māṁdava Kautsīputra Velidatta (L 1058).

Mahārathi Kauśikīputra Viṣṇudatta (L 1079).

Mahārathi Gauptīputra Agnimitra (L 1088).

Mahārathi Vāśiṣṭhīputra Somadeva son of Mahāraṭhi Kauśikīputra Mitradeva (L 1100).

Rājan Māḍharīputra Īśvarasena the Abhira, son of Śivadatta the Abhira (L 1137).

Rājavaidya (royal physician) Vātsīputra Magila (L 1191-92).

Hārītīputra Koṇḍamāna (a Brahman) of Kauṇḍinya gotra (L 1195).

Kauśikīputra Śri Nāgadatta (a descendant of Koṇḍamana above) of Kauṇḍinya Gotra (L 1196.)

Rājan Maḍharīputra Śri Vira Purisadatta of the Ikṣākus (L 1202–4).

The fragmentary inscription of one Vāśiṣṭhīputra (L 1197).

Rājan Hārītīputra Śivaskandavarman of mānavyāsa gotra, of the Kadambas (L 1196).[2]

Rājan Hārītīputra Kakutsavarman of mānāvyasa gotra of the Kadambas.[3]

According to the last inscription (Talguṇḍa pillar) the title Hāritīputra had come to be considered hereditary and like a pravara in the family of the Brahman kings of the line founded by Mayura Sarman. This point is of great interest and will be

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temporary may be justifiably extended to documents dating one or two centuries before or after the exact period treated inasmuch as social forms do not change appreciably over such periods.

[1] This is a Northern inscription, of the Sanchi Stupa but has been included as being definitely of an officer of the Śātakarṇis.

[2] *Ep. Car.*, Vol. VII, Sk. 264.

[3] *Ep. Car: Ibid.*, Sk. 176. Other Kadambas also bore the title Hārītīputra as noted previously.

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considered separately. Here it is sufficient to note that Hārītīputra was used in this royal Brahman family to denote the descent from the mother and that according to the tradition current at the time of the king fourth in descent from the founder, this usage had been prevalent before their attainment of royalty.

While the evidence of the inscriptions of Mahārathis, etc. confirm the conclusion arrived at earlier in this essay, regarding the metronymics, their use by certain Brahman families indicate the true nature of the same.

The contemporary and slightly later inscriptions mentioning Brahmanic gotras are as follows :—

The Hirahadgalli plate inscriptions (L 1200) of the Pallava king Śivaskanda varma mentions Brahmanas of the following gotras—Ātreya, Hārīta, Bhāradvāja, Kauśika, Vātsya.

The Mayidavolu copper plate inscription (L 1205) gives the Agniveśa gotra.

The Koṇḍamundi copper plate seal (L 1328) of rājan Jayavarman mention Brahmanas of the following gotras :—

Gotama, Tānavya, Kauṇḍinya Bhāradvāja, Kārṣnāyaṇa Aupamanyava and Kauśika.

The inscription of the Kadamba kings mention Brahmanas of the following gotras (apart from those noted) :—

King Māndhatṛvarma: Kauṇḍinya gotra[1]; King Madhuvarman—Gautama gotra[2]; King Mṛgeśvarīivarman—Gautama Gotra.[3]

As we know from the evidence of the Kadamba inscriptions, the earlier Kadambas ruled over the Śātakarni kings of Banavāsi and the later ones followed them. Further the Kadamba line was founded when the Pallavas were already in power. If the Banavāsi Śātakarnis are taken as of the same stock as the Andhras of the Purānas (P45),—an assumption which will be justified later on in this essay—the above gotra names come out as current about a century after the fall of the Śātakarni (Andhra) dynasty, in the southern portion of their kingdom. As we have seen previously, some of the Brahmanas mentioned in the inscription are styled Kauśikīputra and Hārītīputra besides giving their gotra. These Brahmanas are of these area—one family being of the Banavāsi kingdom and the other (the Kadambas) also presumably of this Southern area from the evidence of inscriptions.

In their case the terms Kauśikī, Hāritī forming parts of the corresponding compounds, certainly denote the feminines of the gotra names Kauśika, Hārīta. But the gotras of these Brahman families are also mentioned and are shown by

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[1] *Ep. Car.*, Vol. VII, SK. 29.
[2] *Ibid.*, VII, SK. 66. [3] *Ibid.*, VIII., Sb33.

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the same inscriptions to be descending patrilineally (Kauṇinya, Mānavyāsa). Patrilineal Brahmanic gotras are known from the marriage rules in the Dharma Śastras (written by Southerners like Āpastamba as also those compiled in the North, like the Manusamhita) to be exogamous clans in the strictly ethnological sense of the term. Therefore, in the case of the Brahman families the terms Kauśikī, etc. stand for the clan name of the mothers. As the terms descriptive of the mother's name in the Śātakarṇi and other coins and inscriptions are (with the exception of Māḍhari) found to be the same as those which are known to be clan names among contemporary Brahmanas, we may conclude that all these prefixes describing mothers are the clan names of those ladies. The conclusions thus arrived at agree with the grammatical significance of the term "Gotamiya Bālasiri" occurring in the Nasik inscription of the 19th year of Pulumāvi—the single instance where the full name of the mother is available.[1]

6. With the exception of the Kadambas and the Brahmans mentioned in the Malavalli pillar inscriptions, the names of Brahmans in the inscription have only their patronymic gotras recorded without any reference to the mother's gotra. This agrees with the fact that Brahmans follow the patrilineal gotra in the matter of descent. When, therefore, some Brahmans are found, in addition, to mention the gotra of the mother, we may conclude that some social (including socio-economic) regulation regarding the mother's clan was of about the same order of importance as the father's gotra. Further, the mention of the clan on the mother's side is made definitely in the form of "son of a woman of such clan" i.e the relationship to the maternal clan is indicated definitely through the mother, unlike the general way in which the relationship of patronymic ancestral gotra is mentioned. Hence the presumption is that the social regulation relates to some clan function limited to the family, using this term in the strict sense of the social group of the father, mother and their children.[2]

For, a term of social relationship 'T' may be looked upon as determined by functions relating to the family, clan and tribe, separately or together. Representing these by 'l', 'c' and 't' respectively and considering 'f' to denote function we get T=f (l, c, t).

If in any particular case, the descriptive term or some

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[1] Grammatical derivations by themselves are not at all reliable as is seen in the case of derivation of Maurya from a hypothetical mother Mura or of Śātakarṇi from Śatakarṇa.

[2] The terms family, clan, tribe, descent, inheritance, succession are used in this essay (except where the context shows a loose general use) in the sense they are considered to convey according to the Notes and Queries on Anthropology, edited for the British Association (fourth edition)

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associated known custom is found to give definite information or value regarding these unknowns, a solution may be obtained. In the particular cases treated here, the terms gotamīputra, etc. show that the tribe is excluded. In other words t=o in the above. Therefore T=f (1,c).

Again the connection with the family is indicated as the mother-son relationship, which is very definite, and always gives only one value (for the mother). The term T is thus shown to be determined by some function of the clan which is restricted to the family group of mother-son.[1] The affiliation to the clan determines descent, using the term in the sense of the condition in which a person belongs to the social group of his father or mother. With reference to the family i.e. in the matter of discrimination of rights determined by the father-son relationship and mother-son relationship, the affiliation determines or affects the rules of—

(1) Union of the sexes—usually termed marriage regulation.

(2) Succession—in the sense of transmission of rank or other similar social distinction.

(3) Inheritance—restricting the term solely to property.

In the case of the Brahmans who mention the patronymic gotras, and also the mother's gotra, it is apparent that the metronymic term T cannot have any exclusive reference to gotra affiliation i.e. it is not a result of matrilineal gotra affiliation. For the application of the patronymic gotra to the actual person concerned (not to his father or mother) as distinguished from the coupling of the mother's gotra with the term denoting mother-son relationship shows that their gotra affiliation is definitely patrilineal. The metronymic was therefore of secondary importance for the gotra of these persons and its use cannot mean that the clan affiliation of the mother by itself determines all three set of rules of marrige, succession and inheritance. Its use was therefore brought about in the case of the above Brahmans by one or at most two of the above factors.

7. The other inscriptions which mention the mother's clan name may now be examined in the light of the above conclusions. They fall into three groups:—

(*a*) Inscriptions which mention only the clan name of the mother. These are of some of the Mahārathis, the royal physician and the royal foreman of artisans.

(*b*) The Śātakarnis also usually record only the mother's

[1] I have taken the above from some unpublished work of mine incorporated in the lectures on social organisation to post Graduate Students of the Calcutta University. A detailed discussion of the determinatives of terms of social relationship will be found in Westermarck's *History of Human Marriage* as also in W. H. R. Rivers' *History of Melanesian society.*

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clan name ; but as indications are given in many cases of the ancestry of the father they may be classified in a separate group.

(c) Inscriptions which mention the clan name of the mother and also the proper name of the father. To this last class belong that of the king Īśvarasena (provisionally accepting Mādhari as a clan name), the Mahārathi Somadeva, and the son of the royal physician.

The inscription of the Abhira King, son of Śivadatta, we may compare with the Gunda stone inscription of the time of rājan Kṣatrapa svāmi Rudrasiṁha son of rājan Mahakṣatrapa Rudradāman. The record is of a digging of a tank by his senāpati (general) Rudrabhūti son of the senāpati Bāpaka the Abhira. There is no mention of the name or clan name of the mother. The presumption is that the Abhira noblemen did not cite the gotra name of the mother as a matter of general practice but indicated the father's name like the Kṣatrapas. The case is different with the mahārathi or the son of the royal physician. As the inscriptions of class (a) show, the general rule in their case seems to be to mention the clan name of the mother, the father being mentioned with his full title in addition to the use of the metronymic.

The case of the Śātakarni kings is different. They mention (except the first three kings Nos: 1–3) uniformly, the mother's gotra. Also sufficient indication is given by a number of their kings that they all belong to some definite kula. In the case of the Andhra Śātakarni kings (as distinguished from the Andhra bhṛtyas) this kula is the Śātavāhana kula. The inscriptions mentioning the kula are as follows :—

Simuka: L 1113 (Nānāght cave inscription).

Kṛṣṇa : L 1144 (Nāsik inscription of one of his officers Śrī-Śātakarṇi : L 1114 (Nanaghat cave inscription of his queen).

Vāśiṣṭhī putra Pulumāvi - Myakdoni inscription of this king.

His father, the great Gotamīputra : (Nasik inscription of Pulumāvi's time : L 1123).

Kuntala is known to be a Śātavāhana from Vātsyāyana's Kāmasūtra (11-7-28).

Hāla is so indicated in Bāna's Harsacarita and a verse of the saptaśatī (R B 39).

As pointed out above, both Pulumāvi and his father Gotamīputra belonged to the Sātavāhana kula. Therefore the "Kula" was capable of transmission from father to son i.e., was patrilineal.[1]

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[1] See also Pātañjali in corroboration of above resemblance of kula to gotra. *Mahābhāsya*, IV, I, 79 (chowkhamba Sanskrit series; the patrilineal character of gotra itself is definitely stated in IV, 1, 162.

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The "Kula" is mentioned only in the body of the inscription, often apart from the name of the king and never like the metronymic which is invariably adjacent to the royal name and epithet. Therefore the kula which represents a patrilineal clan in embryo was less important than the mother's clan in the matter of regal title. The function of the "Kula" seems to be to point out the genealogical connection through the males. As the founder as well as the intermediate king Hāla, were Śātavāhānas the genealogical connection between the different members of the dynasty is shown to be patrilineal.

We may now consider the conclusion that the use of the mother's clan name by Śātavāhana kings was due to one or more of the three factors—marriage rules, succession, and inheritance. If marriage rules were the sole reason for the use of the metronymic, there would be no point in giving prominence to the gotra name of the mother or even any mention of it in royal inscriptions and coins. While, therefore, marriage regulations may be one of the factors[1] this cannot be the sole reason for it. Inheritance in the case a of king refers to the succession to a kingdom. Theoretically of course inheritance of private property accumulated by a king may be considered; but this is not a possible solution in as much as a rule regarding purely private property cannot affect royal designation. The rule of succession is therefore shown to be the principal factor determining the use of the metronymic in the case of the Śātavāhanas. This is in agreement with the conclusion arrived at earlier in this essay that the connection between the X rulers and R rulers was genealogical and probably through males but that the rule of succession was different. As we have seen, the kings Pulumāvi as well as Kuntala of the X line were Śātavāhanas like the founders. Genealogical connection for both lines was therefore definitely through males, whence it follows that the succession was not through males i.e. was through females, this being the only alternative.

8. The conclusions arrived at in the preceding section regarding succession can be supported directly from the evidence of coins and inscription of the Śātavāhanas.

The coins of the Śātakarṇis fall in two classes :—

(*a*) Those which mention the mother's clan name.

(*b*) Those which do not mention the mother's clan name.

The coins which mention the mother's clan name are

Of Gotamīputra

Of Vāśiṣṭhīputra Pulumāvi

Of Gotamīputra Yajñaśrī

Of Vāśiṣṭhīputra Caṇḍa śrī

Of Vāśiṣṭhīputra Śivaśrī.

[1] Such as exclusion of the mother's gotra from marriageable units.

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These all have the word "Raño" (of the king) at the beginning of the coin legend just preceding the metronymic. The coins of the vilivāyakuras and the Śivalkura are also of this type.

The other coins which can be definitely ascribed to this dynasty are as follows :—

Place of Find.	Inscription	Coin No.
Western India	Raño Siri Sātasa	Nos. 1 and 2.
Do.	Raño Sātakamnisa	No. 9.
Central India (Chanda Dt.)	Siri Pulumāvisa	Nos. 88 and 89.
Coromandel Coast	Siri Pulumāvisa	Nos. 90-93
Andhradesa (Kistna and Godavary districts.)	Gha Sadasa (probably Meghasvati of the Purāṇas).	
Chanda Dt.	SiriYaña Sātakamnisa	No. 164.
Surashtra	Sātakamnisa	Nos. 165-168
	Siri Ruda Sātakamnisa	170.
Uncertain	Siri Ruda Sātakamnisa	No. 179.
Krishna and Godavary Dts.	Siri Ruda Sātakamnisa	
Chanda Dt.	Siri Kanha Sātakamnisa (not No. 2 of Purānas)	Pl. VII G. P. 2-4.

With the exception of the coins Nos. 1, 2 and 9 which are apparently of the third king of the line, the same as that of the Nanaghat inscriptions, none of these coins bear the royal prefix although some of the names are of royal rulers who have elsewhere given the title before the name, invariably accompanied by the mother's clan name.

It therefore appears that on the coins of the Śātavāhanas, the royal prefix and the mother's clan name are associated together and also disappear together except in the case of the third king of the line. In the inscriptions also, the association is invariable (excluding the doubtful case of Śivamaka sada), except in the case of the third king, Śrī-Śātakarṇi of the Nanaghat cave inscriptions. It has therefore to be concluded that except for the third king of the line, the royal title and relationship to the mother went together. In other words, the succession was matrilineal (the holder of the royalty however being always a male).

This is a mode of succession well known to ethnologists and the general feature of it is that the sister's son succeeds the mother's brother. In many cases however, the succession goes first to the younger brothers if there are any (one after the other) and then to the sister's son, the same process being repeated at each generation. Strictly speaking, these males may be considered as acting on behalf of the sister or sister's daughter who is the real heiress. The sons do not inherit the

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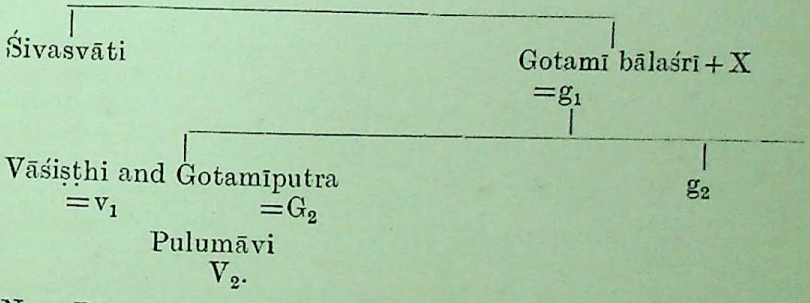
ancestral property in such cases, but are generally allowed to take what the father has himself earned.[1]

9. We may now return to the question of relationship of Yajñaśrī to the famous Gotamīputra. Reasons have been adduced in § 2 of this essay for concluding that the two cannot be related as father and son or as brothers. As a younger brother's son cannot exclude the son of the king and as all other patrilineal relations would be still more removed, we have to turn naturally to the sister's son, who is besides indicated by the rule of succession holding in this dynasty. As Yajñaśrī was a Gotamīputra we have to conclude that his mother was a Gotamī, like the grandmother of Pulumāvi and his own mother's mother. In other words, descent is through the mother in her clan. The remaining function of clan affiliation—marriage rules—is also thus shown to depend on the mother clan.

As we have seen previously, the kings who thus appear to follow matrilineal succession and descent, are at the same time united in the patrilineal Kula of the Śātavāhanas. Working with actual kings, let us see how this is possible.

We know that Gotamī Bālaśri was Gotamīputra's mother. Also that the latter, according to all the Purāṇas, was preceded by Śivasvāti. Hence this king was Gotamī Bālaśrī's brother (at least in the classificatory sense of the term—the nearest clan brother). Using capitals for males and minors for females, the symbol of addition for marriage and the abbreviations v, g, for the gotra names Vaśiṣṭha and Gotama, we get (for practical purposes).



Now Pulumāvi as well as Gotamīputra, being Śātavāhanas, it follows that the father of the latter, namely X, was also a Śātavāhana in addition to Śivasvāti and Gotamī. Both partners of the royal pair therefore belong to the same kula. As in marriage inside the kula the likelihood would be for the partner to belong to the same generation, the royal pair would be related as cousins of some degree, if not of the first. As members of the same

[1] The best summary on this subject will be found in the article on mother right: *Hasting's Encyclopaedia of Religion and Ethics.*

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mother-clan generally do not marry in such cases—and this is supported by the different metronymic of Pulumāvi, son of Gotamīputra—the relationship between the royal pair must have been that of cross-cousins *i.e.* children of a brother and of his sister. As Śivasvāti and Gotamī are presumably so related, at least in the classificatory sense, the queen of Gotamīputra is probably Śivasvāti's daughter. This is confirmed by the inscription of this queen regarding gift of crownlands which she bestows in her own right. [1]

The slightly later work of Vātsyāyana [2] as well as the earlier work of Bodhāyana [3] mention marriage with the mother's brother's daughter as orthodox in this part of India, thereby confirming the above conclusions.

10. The available evidence concerning other kings and their consorts—in the Purānas and inscriptions—confirm the above conclusions.

The Sopara coin of Gotamīputra Yajnāśrī bears on the reverse the inscription "Gotamiputa kumaru Satakani (Chatar) panasa." As Sir R. G. Bhandarkar has pointed out, the "Satakani Chatarpana" is evidently the son of Gotamīputra Yajñaśri, whose name the coin bears on the obverse as that of the reigning king.[4] The Nanaghat cistern inscription found by Pandit Bhagwanlal (the finder of the above coin) records the name of a rājan Vāśiṣṭhīputra Chatarpana—identified by him with good reason with the above mentioned chatarpana son of Gotamīputra. Therefore the son of this Gotamīputra was also a Vāśiṣṭhīputra.[5]

Again, Vijaya the successor of Yajñaśrī had a son called Caṇḍaśrī, who was a king (No : 29 of the Purānas). From the inscriptions we know of a Vāśiṣṭhīputra Śrī Caṇḍa Śātaka—identified with the above. As Vijaya was the successor of Yajñaśri and was not his son, he must have been a Gotamīputra (being the sister's son). We therefore get an alternation of Gotamīputras and Vāśiṣṭhīputras for three successive royal rulers and their equally royal sons. The Gotamīputras therefore all married their mother's brother's daughters. The genealogy from Śivasvāti to Caṇḍaśrī therefore works out as follows :—

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[1] Lüder's list No. 1126, see Appendix A, and A.S.W.I., Vol. IV, Nasik No. 14.

[2] *Vātsyāyana*, Kāmasutra III-3-3. The references to the Kāmasutra is given with respect to the arrangement followed in the Chowkhamba edition, Benares.

[3] *Bodhāyana*, Dharmasutra, I, 1, 19, (Edition of Pandit Śrīnivāsācarya, Mysore, 1907).

[4] R.B 21, note 1. The unworn coin found by the Pandit had "panasa" and traces of "chatara" (the coin was badly stamped); the cistern inscription is "Raño vasathiputasa chatarapana satakanisa" showing that chatarapanasa is the correct form.

[5] See Appendix B.

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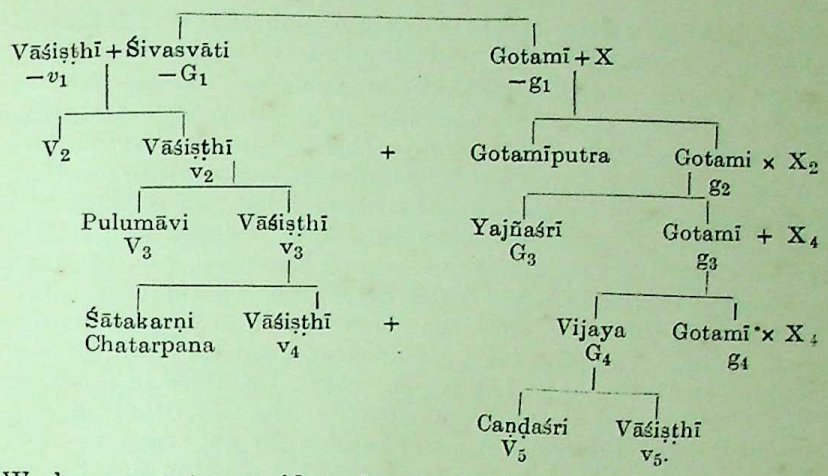

We have now to consider who are the husbands of the Gotamīs g_1, g_2, g_3, g_4 the royal mothers. As concluded in the preceding sections, the succession was matrilineal in this dynasty, but at the same time the royal sons Pulumāvi, and Caṇḍaśrī were rulers over considerable kingdoms. The Śātakarni Chatarapana had certainly royal rank as he is definitely styled rājan in the cistern inscription, though in the coin he is not so styled. Above all, the great Śri Śātakarṇi, son of Kṛsṇa was not only an independent king, lord of dakṣiṇāpatha, but the sovereign power of his time, established by the successful performance of the Rājasuya ceremony. The presumption is that the royal sons are represented in the line of rulers excluded from the Vāyu and Brahmāṇḍa accounts.

Let us now examine the relationship of three of these royal sons represented in the genealogy given above. It is at once noticed that each succeeding ruler is the sister's son of the preceding king. As these Vāśiṣṭhīputras thus follow the same law of succession as the Gotamīputras, mention the mother's clan name just like them and are also Śātakarṇis and very near relations of the latter kings, belonging, like them, to the Śātavāhana Kula, we are justified in concluding that their marriage rules were also the same as that of the Gotamīputras. That is, the Vāśiṣṭhīputras also married their mother's brother's daughters.

In the Nasik inscription of Gotamīputra and Pulumāvi, Gotamī Bālaśri is styled Mahādevi, a title applied only to the principal queen of a king. That the Śātakarṇi Śātavāhanas followed this mode of address is shown by the mention of Mahādevi Malayavati queen of Kuntala Śātakarṇi in Vātsyāyana (II-7-28). The father of Gotamīputra was therefore a king. As he could not have preceded Gotamīputra, in place of Śivasvāti, his rule must have been over some other kingdom. The fact that several generations of fathers and their royal sons had ruled over the realm of the R rulers and the Paiṭhan king-

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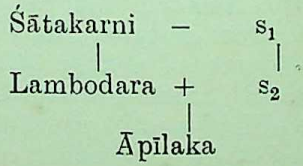
dom of the Q rulers, create a presumption that the father of Gotamīputra may have been a ruler of the latter kingdom.

A question might arise that the Q rulers do not necessarily represent rulers over the same kingdom. But their inclusion in the Paurāṇic list (Matsya) shows that they were very powerful kings. This is borne out by references in literature (Kathāsarit sāgara, etc.) which associates them with Pratiṣṭhāna and the Deccan. Inscriptions show that two of these kings were acknowledged to be lords of dakṣiṇāpatha, while one of them performed the Rājasuya. Distribution of coins and inscriptions of the Vāśiṣṭhīputras show that this area was largely within their realm. The genealogy so far drawn up also postulate a continuity in the line of Q rulers. Also, we know of no other line of Śātakarṇi Śātavāhana rulers. The Hārītīputras and others were of different kulas and besides do not seem to have been powerful enough to have been given a place in the Paurāṇic main lists.

The homogeneity of Q rulers may therefore be taken as established. The presumption that the father of Gotamīputra was a Q ruler may now be examined in the light of further evidence from the Purāṇas. The Matsya list names three kings (6-8) Śātakarni, Lambodara and Āpīlaka who follow one another, as related patrilineally in the descending line—Lambodara being styled son of No: 6 and Āpīlaka son of Lambodara. According to the succession postulated, however, Lambodara cannot succeed Śātakarṇi. In agreement with this we find that Lambodara is excluded from the revised versions. But the question arises, how could Āpīlaka, the son's son of Śātakarṇi succeed him in place of the sister's son. This may of course be possible if Lambodara married his father's sister. As we have no evidence of this form of marriage among the Śātakarṇis, and other explanations suffice, this possibility may be ruled out. The long reign of Śātakarṇi (56 years) is sufficient to account for the royalty passing on to the second generation after him. The rule of succession however requires that this successor should be the sister's son of the sister's son of Śātakarṇi i.e., his sister's daughter's son. This means that the mother of Āpīlaka was Śātakarṇis sister's daughter, while the father of Apīlaka was Śātkarṇi's son.



(s_1, s_2 represent the sister and sister's daughter of Śātakarṇi.) This agrees with the inferences about X, father of Gotamī putra. Such a conclusion would be in harmony with the fact that sons of R rulers were provided as Q kings; whence, the latter being

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very powerful, in their own right, they might, in their turn try to provide their sons in the R kingdom. The equation V_1 to X_1, V_2 to X_2 and so forth, foreshadowed by the case of Gotamīputra's father and greatly strengthened by the subsequent analysis may therefore be definitely postulated. It amounts to marriage with the father's sister's daughter in addition to the previously proved system of marriage with mother's brother's daughter. It is in fact the fully developed cross-cousin-marriage. As these two forms of cross-cousin marriage often go together, especially in South India this would be nothing unusual.[1]

One important effect of it is that the mother's brother and father's sister's husband are the same person and also the father of the wife or husband. This peculiar state of multiple relationship enables us to understand why the Pauranic writers, although recording names of kings known to be related as father and son in series, could not generally indicate the relationship of any king to his successor. For the social rules must have led to a definite terminology of relationship[2] and a special term used to denote the multiple relationship between succeeding kings of each line (sister's son, daughter's husband, etc). As the language in which the Purāṇas were written were of a society lacking in such social rules and terminology of kinship, it was not possible to translate the same and indicate the relationship. This removes a difficulty which would otherwise stand against the view that the writers of the Purāṇas really knew the succession and that the revision was based on genuine scholarly work.

11. In the final paragraph of the preceding section, I have tacitly assumed that the Śātakarṇis were a homogeneous group of people, among whom this special type of marriage prevailed. For the terminology of kinship cannot be fixed or altered by a peculiar practice of a single family like the kula of Śātavāhana. To justify the assumption we have to examine the contemporary inscriptions and literary records.

Out of a total of nearly 400 inscriptions collected by Lüders in his list of the southern records, only those which have been previously indicated mention the mother in the prominent fashion noted. The remaining inscription record the name of the donor and (usually) his profession, the place of his birth or the father's name or both. The records include people

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[1] W. H. R. Rivers, *Journal of the Royal Asiatic Society*, 1907, p. 611 ff.

[2] The dependence of the terminology of kinship, including Indian examples of the same will be found in W. H. R. Rivers, *Kinship and social organisation*.

See also K. P. Chattopadhyay, *Kinship and Levirate in India*, *Man*, March, 1922.

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from Kalyan[1] Nasik[2] Sopara[3] Chemula[4] Vaijayanti[5] Dhanakakata[6] and Pratiṣṭhāna[7] The professions or castes of these donors are of merchants[8] bankers[9] goldsmiths[10] jewellers[11] black smiths[12] officials[13] Brahmans[14] gardener[15] ironmongers[16] traders[17] carpenters[18] ploughman[19] fisherman[20] perfumers[21] and corndealer.[22] In no case do they record the mother's clanname or record her name before the father's name (where these are given). The parentage is given with reference to the mother only in two cases, and these bear no special import as not mentioning the clanname of the mother (L1252, 1260).

As we have seen, the people who lay stress on the maternal side in their indication of descent, are the Śātakarṇis of the Śātavāhana and other kulas, certain of their officers, and the Mahārathis. Further, all officials of the Śātākarṇis did not follow this practice. It was not therefore followed (by such as those who did so) by virtue of their office.

The case of the Mahārathis has to be considered in detail owing to different interpretations given by different scholars to that term.

The Kanheri Buddhist cave inscription of the time of rājan Hārītīputra Vinhu kada Chutu kulānanda Śāta karṇi (L 1021) describes the donor as the daughter of a mahārāja and a mahābhojī; a mahārathinī and the mother of Skandanāga Śātaka.

The Nanaghat inscription describes the queen of Śri-Śātakarni as the daughter of the Mahārathi Kalalāya, the scion of the Amgiya kula (L 1112).

The Banavāsi stone inscription of the time of the rājan Harītīputra Vinhukada Chutu kulānanda Śātakarṇi mentions a mahābhojī who is the daughter of a mahāraja. The Kuda Buddhist cave inscription mentions the donor as lekhaka or writer to the Mahābhoja Māṁdava Skandapálita son of Mahābhojī (L 1037).

Coins have been found in Chitaldrug in Mysore, (B. M. No. 233 and others) bearing the legend "Sadakana Kalalaya Mahārathisa."

The Banavāsi inscription mentions a Mahabhojī as

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[1] Lüders' list, Nos. 986, 998, 1000, 1001, 1005, 1032, 1177, etc.
[2] Ibid., 985 and 1109.
[3] Luders' list, 995.
[4] Ibid., 996 and 1033.
[5] Ibid., 1087.
[6] Ibid., 1090, 1092, 1097 and 1121.
[7] Ibid., 1187.
[8] Ibid., 995, 998, 1000, 1001, 1024, 1214, etc.
[9] Ibid., 1063, 1064, 1073 and 1109.
[10] Luders' list, 986 and 1177.
[11] Ibid., 1005.
[12] Ibid., 1032.
[13] Ibid., 996, 1033, 1037, 1045, 1139, etc.
[14] Ibid., 1035 and 1050.
[15] Ibid., 1051 and 1061.
[16] Ibid., 1055.
[17] Luders' list, 1062, 1065 and 1066.
[18] Ibid., 1092.
[19] Ibid., 1121.
[20] Luders' list, 1129.
[21] Ibid., 1187.
[22] Ibid., 1180.

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daughter of a Mahārāja; the Kānheri record shows that a Mahārathinī was daughter of a Mahārāja and a Mahābhoji his wife. The fact of being Mahābhoji and Mahārathinī were therefore considered worthy of mention along with the relationship to a king. The Nānāghat inscription shows us a royal queen who is daughter of a Mahārathi. The coins of Kalalāya indicate that the fact of being a Mahārathi was considered important enough to be mentioned in the coin legend. From a comparison of the coins of the Śātakarṇi kings, the term Mahārathi appears to indicate a title, presumably inferior to that of a king. The Kuda inscription shows that the donor considered his employment as lekhaka to the Mahābhoja important enough to mention it in the record. From a comparison with the inscription of the foremen of artisans and other officials of the royal Śātakarṇis, we have to infer that Mahābhoja also indicates a ruler of some kind, presumably inferior to a king. The Hirahadagalli plates contain a notification of certain gifts by the Pallava king to rājakumaras, senāpatis, ratthikas, mādabikas, deśadhikatas, bhojakas of various villages and others in the Satahani ratha, i.e. province of Śātakarṇis or Śātavāhanas. The terms ratthikas and bhojakas here undoubtedly refer to titles and privileges. The terms mahārathi and mahābhoja, from the known force of the affix mahā in mahākṣatrapa, mahādevi, mahāraja, therefore mean overlords of ratthikas and bhojakas or a superior grade of ratthikas and bhojakas. The closeness of ratthika to the terms senāpati and rājakumara suggest that it (and consequently Mahārathi) betokens a higher dignity than bhojaka (and hence Mahābhoja). These conclusions agree with the evidence of the coins and inscriptions. They further bring out that the Mahārathis and Mahābhojas were often connected by ties of marriage and descent to the kings and some are mentioned as Śātakarṇis. It may therefore be concluded that they represent the ruling aristocracy and belong to the same tribe or group of people. The officials who differed from other officials in following the aristocratic custom of mentioning the mother's class name also presumably belonged to the same stock.

The Mahārathi Somadeva son of the Mahārathi Mitradeva seems to differ from the above people in mentioning the father's name in addition to the mother's clan name. His case has been briefly considered along with other members of the group (c) of §.7 of this essay. As pointed out there, the son of the royal physician also records the name of the father in addition to the metronymics. These two cases are not quite parallel to that of the Abhira king. The distinction in the case of the son of the royal physician certainly cannot indicate difference of custom inasmuch as his father uses only the metronymic. In his case the name and official position of the father seems to be mentioned as indicating the position at court, held by the latter

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and incidentally the social elevation reflected on the son. The case of the Mahārathi Somadeva may be parallel to that of the son of the royal physician or it may point to a real difference of social custom. With the meagre data available from a single inscription, nothing further can be said. The alternative that the divergence found in this record may be due to a difference of social custom does not go against the previous conclusions regarding other Mahārathis, inasmuch as all Mahārathis need not have been of the same social group, although they generally seem to have been drawn from Śātakarṇis and their relations.

12. We may now proceed to recast the Pauranic genealogies in the light of the conclusions so far made. As we have seen, there were two lines of rulers, with matrilineal succession. The line associated with Paiṭhana and the title "lord of dakṣiṇāpatha" is that excluded in the later account. As however the original list of the Matsya (and Bhaviṣya) was a joint list of both lines and the two sets of kings very closely related,[1] it is quite possible that one or two cases may have been overlooked in the final revised list. The Vāyu shows in some Mss. such incomplete revision with respect to No: 7, Lambodara son of Śātakarṇi, No: 6 As we have seen, the succession was to the sister's son, the own son being heir to the other kingdom. Lambodara must therefore have been a king of the Q kingdom and not of the R realm. This agrees with the general Vāyu and Brahmāṇḍa lists. The peculiar manner in which the son of Kṛṣṇa,—Śātakarṇi (No: 3)—is mentioned leaves no doubt that he was not a king of the R line For it is stated that he was a great king; but there is no mention of regnal period although it is given in the earlier account. The obvious meaning is that his name is mentioned only as he was a great king and son of Kṛṣṇa (and as we shall see, one who performed the Rājasuya)—but no regnal periods were given as he did not reign in the R realm. The only genuine case of overlooking in the process of revision seems to be that of Caṇḍaśrī, son of Vijaya. He could not, on the hypothesis put forward, have reigned in the R kingdom but must have been a Q ruler.

As the two Śātakarnis, No. 3 and No. 6 were of the same generation, and No. 3 ruled only 10 years Lambodara should come before Purṇotsaṅga. Caṇḍaśrī will come after Śivaskandha Śātaka.

According to the Puranas, Simuka was the founder of the line and was succeeded by his younger brother Kṛṣṇa. The next king named in Matsya is Śrī—Śātakarṇi, who the later

[1] The relationship at any point may best be described as follows:—The son of the king of one of the kingdoms was the heir to the other realm. The son of the king's sister was the heir of his realm. Also, every king was related as grandson in the male line to his second predecessor

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versions make it clear was not a R ruler. As the inscriptions at Nānāghat show, he was lord of dakṣiṇāpatha i.e. he was associated with what has been called the Q kingdom. In the revised list, the next king is Śātakarṇi (No: 6) who ruled for 56 years. On our hypothesis, he should be the sister's son of Kṛṣṇa, being his successor in the R Kingdom. As the inscription of Kṛṣṇa's officer at Nasik shows, part at least of the Q kingdom had been ruled over by him. The southern home of the Śātakarṇis and their recent rise to power however make it clear, that it was probably conquered territory. This would mean that the son succeeded to the conquered realm, and the sister's son to the inherited kingdom. This agrees with the fairly general practice, among matrilineal people, of the son getting the property acquired by the father, while the sister's son takes the inherited ancestral property.

Treating this as the point of separation of the two lines of Śātakarṇis we get :—

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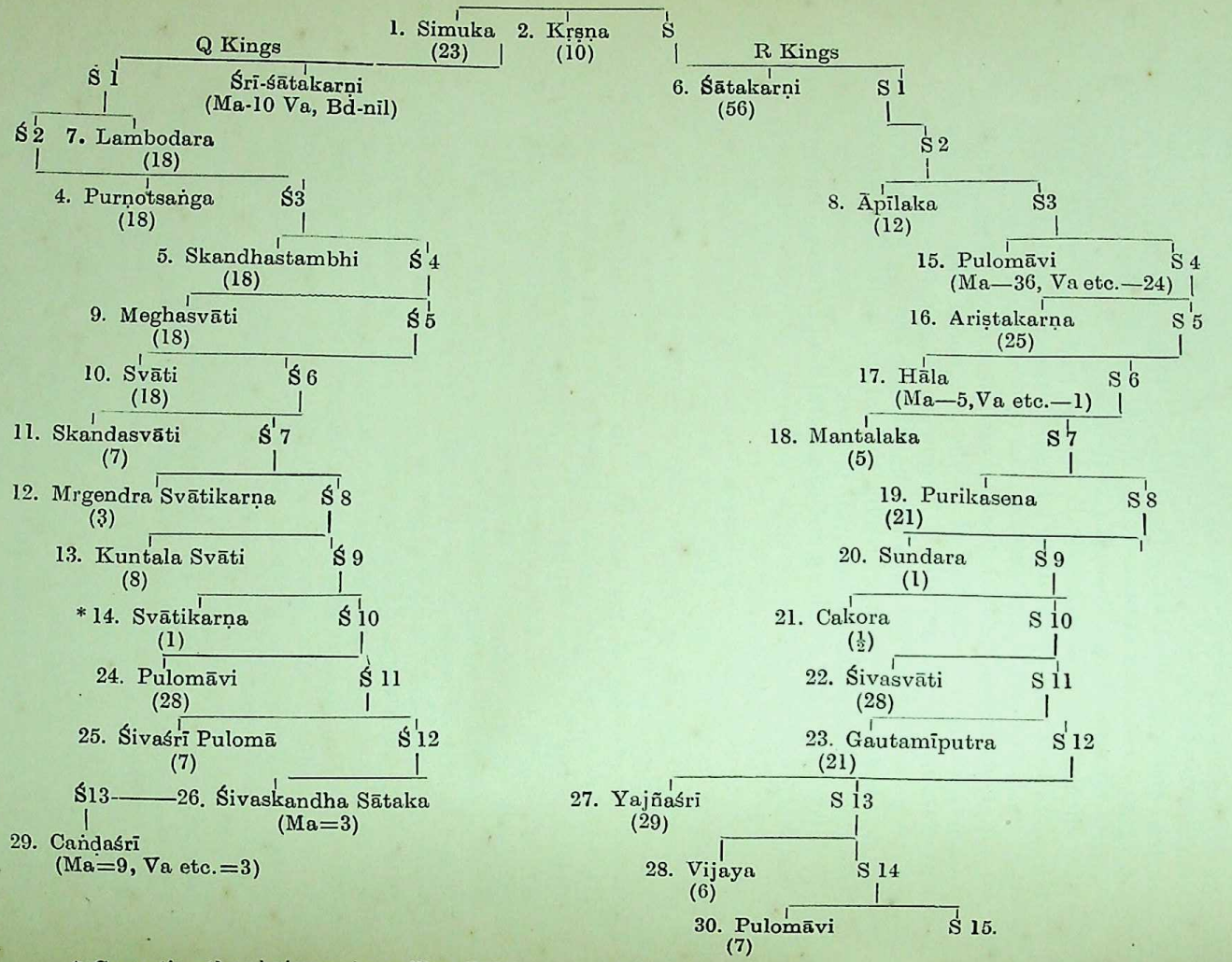

* Correcting the obvious mis-spelling Svātivarna. Although not shown in this table, there is a break in the line of Q Kings here.

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It is apparent that the correctness of the hypothesis put forward and the genealogies reconstructed on its basis can be rigorously tested by means of dating derived from independent sources.

The date of the rulers of this dynasty may be obtained from

(*a*) The Synchronism of Kharavela with Śātakarṇi, generally accepted as No: 3 of the Nanaghat cave inscriptions.[1]

(*b*) The position of the Andhras as successors of the Kaṇvas and Śuṅgas in the Pauranic accounts.

(*c*) The synchronism of Śātakarṇi lord of dakṣiṇāpatha with Mahākṣatrapa Rudradāman (L 965).

The two first modes involve determination of the chronology of other kings. They will be discussed later. The last way of approach is easier as inscriptions of Rudradāman are dated in the Śaka era. This avenue will be explored first.

13. The Nasik inscription of Mahādevi Gotamī Bālaśrī mentions the uprooting of the Kṣaharatas and the restoration of the glory of the house of Śātavāhana by Gotamīputra. The provinces mentioned in this inscription as conquered by the latter, are found from the inscriptions of Ṛṣavadatta (Ll099, 1131-35, etc.) son-in-law of Nahapana, and of Ayama the minister of this Mahākṣatrapa (L. 1174), to have been largely in possession of the Kṣaharata ruler. The coins of Nahapana restruck by Gotamīputra[2] in Nasik district, along with the above facts, leave no doubt—as Sir R. G. Bhandarkar has pointed out[3] that the victorious arms of Gotamīputra were carried against Nahapana and his successors. As the X kingdom of Śātakarṇi Śātavāhanas had its capital at Paiṭhan[4] it proves that the satraps had overrun and conquered the greater part, (if not the whole of it) of this Northern realm at some period anterior to this. Such a conclusion agrees with the interregnum revealed in the Paiṭhan rule if we add up the

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[1] See § 17 of this essay for references.

[2] B. M. Nos. 253–58 Of the Jogalthembi hoard of 14000 coins of Nahapana about two thirds were restruck coins of Gotamiputra. *J.B.B.R.A.S.*, XXII, P. 224.

[3] R. B. p. 28.

Most or all of the assumptions made in drawing the above conclusions have been challenged by different scholars. I have not considered it necessary to treat each point separately as arguments and verifications that follow have appeared to make that unnecessary.

Mr. R. D. Banerji's article on "*Nahapana and the Saka Era* Part II" *J.R.A.S.*, 1925, and Mr. K. A. Nilkanta Śāstri's article on *Śāta vāhanas, in J.R.A.S.*, 1926, may be read for a summary of the objections.

[4] Kathāsaritsāgara, Edition of Durgaprasad revised by Kasinath Sarma, Bombay, 1883.

VI-VIII Taranga.

McCrindle, Ptolemy, p. 175.

* Correcting the obvious mis-spelling Svātivarna. Although not shown in this table, there is a break in the line of Q Kings here.

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regnal periods on both sides of the table of Śātakarṇi rulers up to the accession of Gotamīputra and his son Pulumāvi. For, the total from Simuka down to the predecessor of Gotamiputra is 206½ years; and down to the predecessor of Pulumāvi, only 152 years. Before considering this point further, the actual dates have to be settled first.

As the last recorded date of Nahapana is 124 A. D. and as he was then styled Mahākṣatrapa, it is apparent that the Paiṭhan kingdom of the Śātavāhanas was then practically non-existent. Pulumāvi son of Gotamīputra must therefore have come to the throne of Paiṭhan after this date. As his regnal period is given as 28 years, it follows that his rule could not have ended before 152 A. D. As the Junagaḍ inscription of Rudradāman is dated in Saka 72 i.e. 150 A. D., the Śātakarṇi lord of dakṣiṇāpatha referred to by him must be Pulumāvi. According to the Nasik inscription of Gotamī Bālaśrī, inscribed in the year 19 of Pulumāvi's reign, the grandson of the queen, the lord of dakṣiṇāpatha gave a village to allow the cave to be taken due care of, "intending it as a bridge of merit for his father."[1] Gotamīputra was therefore just dead, the cave being inscribed with a eulogium to him and a village given by his son for his happiness in after life As his regnal period was 21 years, it follows that Pulumavi came to the Paiṭhan throne two years after his father's accession to the R Kingdom. As Nahapana was over-thrown by Gotamīputra, this raises the lower limit of Pulumāvi's accession to 126 A. D.

The Nasik inscription of Gotamīputra records that, from his victorious camp, Gotamīputra ordered the minister in charge of the Nasik district to make over certain royal lands till lately in the possession of Ṛṣabhadatta to certain monks. The beginning of the inscription corresponds with records of this class dated from "victorious camp" where the king stopped during progress.[2] This was in the eighteenth year of his reign and therefore the sixteenth of Pulumāvi. This reconquest of Govardhana shows that some one had occupied this territory between the overthrow of Nahapana and the sixteenth year of Pulumāvi. The lower limit for this reconquest therefore comes out as 142 A. D. The inscriptions of Pulumāvi at Nasik in the 19th and 22nd year and at Karle in the 24th year of his reign show that he had remained in possession of this area since the reconquest. The Nasik inscription of Yajñaśrī in the seventh year of his reign and therefore 26th year of Pulumāvi (since Yajñaśrī succeeded Gotamīputra, father of Pulumāvi) confirm this conclusion. The lower limit for Pulumāvi's 24th year is 150 A. D.

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[1] *Archaeological survey of Western India*, Vol. IV, Nasik No; 18. Sir R. G. Bhandarkar's objection is based on the idea that Gotamīputra had been dead for 19 years and is not valid.

[2] *A.S.W.I.*, Vol. IV, Nasik No. 13, pp. 104-5.

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and of his 26th 152 A. D. But according to the Junāgaḍ inscription of Rudradāman, the lord of dakṣiṇapatha had been crushingly defeated and Aparānta occupied by 150 A. D.

Overlordship such as claimed by Rudradāman in 150 A. D. means subjugation of Nasik and reduction of Pulumāvi to an inferior position. As however the Nasik area and position of lord of dakṣiṇāpatha seems to have remained to Pulumāvi since his father's reconquest of Govardhana, it is evident that the date of this latter event must be placed after 150 A. D. We thus get a more approximate lower limit for Gotamīputra's accession. He could not have come to the throne before 132 A. D.

14. According to the Andhau inscriptions, Rudradāman was ruling at Cutch as the viceroy of his grandfather Castana [1] in 130 A. D. This explanation implies that the latter had become Mahākṣatrapa by that time.

As Nahapana is found claiming the same overlordship in 124 A. D. it is evident that he had lost his suzerainty at this date, in favour of Castana. It would therefore appear that Gotamīputra had crushed him at a time when he had already been losing ground to the Śaka Satraps. The inscription of Gotamīputra from his victorious camp makes it clear that Ṛṣabhadatta son-in-law of Nahapana had been fighting against him in that campaign. This would mean that the latter after Nahapana's death had allied himself with the Śaka Mahākṣatrapas. This would agree with the statement in the eulogium in Gotamī Bālaśri's inscription that he had uprooted the Kṣaharata race and destroyed the Śakas, Yavanas and Pahlavas. The statement of Ptolemy that Tiastenes (Castana) had his capital at Ozene (Ujjain) and Polemaios (Pulomāvi) at Baithana (Paiṭhan) [2] without any mention of Nahapana agree with the above conclusions. As the growth of a rival power at the expense of the Kṣaharata Kṣatrapas was soon bound to bring it into conflict with the Śaka Mahākṣatrapas, it is evident that the accession of Pulumāvi must have been followed by war with these rulers. According to Rudradāman's Junāgaḍ inscription the title of Mahākṣatrapa was won by him by his own valour. This shows that either Castana or his successor had lost the Mahākṣatrapa title and Rudradāman had begun his independent rule, as a mere Satrap

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[1] *Archaeological Survey of India, Annual Report*, 1905-6, pp. 166-7. D. R. Bhandarkar, *J. Bomb. Br. R. A. S.*, Vol. 23.—Epigraphic notes,—gives a different interpretation. For the final view see D. R. Bhandarkar, *Indian Antiquary*, June 1918, p. 154. This conclusion was in modification of his earlier views at the suggestion of Mr. R. C. Mazumdar that the occurrence of the two sets of names was in accordance with the practice of a Mahākṣatrapa having his successor as his viceroy with the title Kṣatrapa.

[2] McCrindle, Ptolemy, *Ibid.*

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The mention of relationship with the lord of dakṣiṇāpatha in the same inscription and the occurrence of the name of a Śātakarṇi queen as a daughter of a Mahākṣatrapa, probably Rudradāman, suggests that the victory of the Śātavāhana ruler was followed by a treaty and marriage, the defeated ruler being allowed to continue to rule in an inferior position. Pulumāvi's defeat sometime before 150 A. D. by Rudradāman is mentioned as the former's second reverse of great magnitude. It seems to have cost him Nasik. The inscriptions of Pulumāvi at this place in the 2nd and 6th years of his reign show, he had not suffered any such loss of territory up to that time. His first serious defeat at the hands of Rudradāman must therefore have taken place after this time. Allowing at least two years for the first conquest of Rudradāman and the Śātavāhana reconquest, and an interval of at least of the same length between this reverse of Rudradāman and victorious campaign, we come to the conclusion that Pulumāvi must have come to the throne before 140 A. D.

This upper limit of Pulumāvi's accession is obtained by alloting only four years to three great military campaigns involving serious reverses on both sides. By the same computation, however, Gotamīputra should have undertaken the reconquest of the lost territories within a year or so of its loss. In that case we should get the year 150-51 A. D. as the eighteenth year of Gotamīputra's reign for Rudradāman appears to have (and been also assumed to have) but recently defeated Pulumāvi. This would make the date of accession of Gotamīputra 132-33 A. D. and Pulumāvi 134-35 A. D. This agrees with all the previous deductions and does not necessarily require the allotment of an increased period for the victorious campaigns of Rudradāman. As they appear to have taken place after the 6th year of Pulumāvi, we get a maximum interval 9-10 years for all four campaigns. As Rudradāman's first victorious campaign need not necessarily have been undertaken at the end of the sixth year of Pulumāvi, the above interval cannot be said to go against the computations.

15. We may now return to the question of the interregnum. As we have seen, the two totals of regnal periods of rulers before Gotamīputra in the R kingdom and Pulumāvi in the X kingdom do not tally. The total for the X kingdom falls short of the other by $54\frac{1}{2}$ years at the accession of Gotamīputra and therefore by $56\frac{1}{2}$ years at the crowning of Pulumāvi. Assuming that there was only one interregnum the point of breach in the Paithan line may be easily obtained. As the overthrow of this kingdom took place $54\frac{1}{2}$ years before the accession of Gotamīputra, it would correspond to the end of the year one, of Mantalaka, in the R kingdom. Calculating down from Simuka, we find that Mantalaka of R kingdom and Svātikarṇa (No. 14) of the X kingdom came to the throne in

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the same year. As Svātikarṇa ruled for one year only and there is no other king between him and Pulumāvi, son of Gotamīputra, the break in the line must have occurred at the end of his reign of one year.

The other kings with short reigns are Nos. 11-13, 17-18, 20, 21, 25, 26, 28, 29, and 30. As is evident from the tables, rulers numbered 28 and 30 represent the two last kings of the R line and 25, 26, and 29, of the X line. Those numbered 11-13 are the immediate predecessors of Svātikarna and 17, 18 the contemporaries of this ruler in the R kingdom. As the kingdom broke up shortly after Yajñaśrī's and Pulumāvi's reigns, and as a similar break up took place at the time of Svātikarṇa, the short length of regnal periods compared to the average (17 for R kings and 13 for X kings) agree with the other facts. Regarding rulers 20, 21 which might be considered as not fitting in with the above facts, we find that the accession of Hāla in the R kingdom was immediately before the overwhelming of the dakṣiṇāpatha kingdom. Mantalaka who begun his rule at the time of this catastrophe is described as a very powerful sovereign. This can only mean that he carried on vigorous warfare against the invader and was successful. The long reign of his successor supports this conclusion. The extremely short reign of the two immediate successors of Purikasena therefore indicates a weakening of the R kingdom. This agrees with the fact that we do not get an X king until a much more stable condition is reached in the R kingdom. The recovery seems to have again begun under Śivasvāti and the kingdom attained its full vigour with the accession of Gotamīputra.

One objection may be raised here. We have previously postulated that the mother of Gotamīputra being styled Mahādevi, his father must have been a royal ruler. It was concluded that his rule was over the X kingdom. But we do not find mention of any such king in the Pauranic lists. The objection is not however serious. The title and succession may have been passed on from uncle to nephew as before, without there being any remnant of the actual kingdom or at any rate, of the sovereignty. Also, Gotamī Bālaśrī being the actual heir to the R crown, was styled Mahādevi. Her brother, and after him, her son, ruled as her representative, their titles being derived by virtue of the powers exercised by them by delegation. Her title would not therefore be affected by her cousin—husband having lost his kingdom.

We may now proceed to the far more important question of actual dating of the reigns of the monarchs. The Nanaghat inscription of Śri Śātakarṇi shows that he performed the Rājasuya ceremony. As the successor of the Kaṇvas and Śuṇgas in the Pauranic list, this was a vindication of the claim of the Śātakarṇis as the paramount power of India. Their overthrow by any other ruler would practically mean that the

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latter became the suzerain power of India. The Hāthigumpha inscription of Kharavela[1] shows that at least one aspirant to overlordship undertook an expedition in defiance of the Śātakarṇis, though not against them. Actually the latter were finally destroyed by the Śaka Satraps who thereby became the greatest power in Western and Southern India.

In the preceding section we have seen that Gotamīputra came to the throne in 132-33 A. D. As this is Śaka 54-55 and the overthrow of the X kingdom took place 54½ years earlier, it follows that the beginning of the Śaka era and the overwhelming of the Paiṭhan rulers by the Satraps synchronised. In as much as these Kṣatrapas and Mahākṣatrapas mark their records in the years of this era, it is evident that the beginning of the era commemorates the overthrow of the then paramount power of India by the Śakas (whether these were actually the Kṣatrapas or were their overlords, being left open).[2]

Although the name of the era is Śaka and is mentioned in the earlier inscriptions as Śaka-nṛpakāla, later records show them as Śālivāhana Śaka and in one case as the era of Śātavāhana.[3] This latter piece of evidence and that of the lexicon Hemacandra to the effect that Śālivāhana is a corruption of Śātavāhana, show that the era had some connection with the Śātavāhanas as well as Śakas. This is of course true in as much as it is connected with the overthrow of the Paiṭhan Śātakarṇis and probably to some extent also of the other kingdom of this people. The immediate recovery of the latter under the powerful Mantalaka who came to the throne in 78 A. C. agrees with the tradition of the defeat of Vikramāditya of Ujjain by Śālivāhana to whom popular Western Indian tradition ascribes the Śaka era.

The above view of the Śaka era is not the one generally accepted. A criticism of other hypotheses appear however superfluous as the evidence adduced in support of this view appears to be conclusive.

The chronology of the Śātakarṇis thus arrived at may now be put down in terms of the Christian era, assuming that there was no other interregnum except the one discussed.

No.	Name.	Regnal Period.
1	Simuka ..	.. 75-74 B.C. to 53-52 B.C.
2	Kṛṣṇa ..	.. 52-51 B.C. to 43-42 B.C.

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[1] K. P. Jayaswal, *J. B. O. R. S.*, 1918, p. 364 ff.

[2] The term Śaka is here used in the sense in which the era is termed Śakanṛpakāla, without any ethnical reference as to who these people termed Śaka by the Indians, actually were.

[3] *Ep. Carn.*, Shimoga, Vol. VII., Introduction, page 38, on SK. 281.

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X. KINGS.

3	Śrí Śātakarṇi ..	.. 42-41 B.C. to 33-32 B.C.
7	Lambodara ..	.. 32-31 B.C. to 15-14 B.C.
4	Purnotsaṅga ..	.. 14-13 B.C. to 4-5 A.C.
5	Skandhastambhi	.. 5-6 A.C. to 22-23 A.C.
9	Meghasvāti ..	.. 23-24 A.C. to 40-41 A.C.
10	Svāti ..	.. 41-42 to A.C. 58-59 A.C
11	Skandasvāti ..	.. 59-60 A.C. to 65-66 A.C.
12	Mṛgendra Svātikarṇa	.. 66-67 A.C. to 68-69 A.C.
13	Kuntala Svāti	.. 69-70 A.C. to 76-77 A.C.
14	Svatikarṇa ..	.. 77-78 A.C. to 78 A.C.

Interregnum from 78 A.C. to 133-34 A.C.

24	Pulomāvi ..	.. 134-35 A.C. to 161-62 A.C.
25	Śivaśrī Pulomā	.. 162-63 A.C. to 168-69 A.C.
26	Śivaskandha Śātaka	.. 169-70 A.C. to 171-72 A.C
29	Caṇḍaśrī ..	.. 172-73 A.C. to 174-75 A.C.

(See Appendix B for Nos. 25, 26 and 29)

R. KINGS.

6.	Śātakarṇi ..	.. 42-41 B.C. to 14-15 A.C.
8	Āpīlaka ..	.. 15-16 A.C. to 26-27 A.C.
15	Pulomāvi ..	.. 27-28 A.C. to 50-51 A.C.
16	Ariṣṭakarṇa ..	.. 51-52 A.C. to 75-76 A.C.
17	Hāla ..	.. 76-77 A.C. to 76-77 A.C.
18	Mantalaka ..	.. 77-78 A.C to 81-82 A.C.
19	Purikasena ..	.. 82-83 A.C. to 102-103 A C.
20	Sundara ..	.. 103-04 A.C. to 103-04 A.C.
21	Cakora ..	.. 104-05 A.C. to 104-05 A.C.
22	Śivasvāti ..	.. 104-05 A.C. to 131-32 A.C.
23	Gotamīputra ..	.. 132-33 A.C. to 152-53 A.C.
27	Yajñaśrī ..	.. 153-54 A.C. to 181-82 A.C
28	Vijaya ..	.. 182-83 A.C. to 187-88 A.C.
30	Pulomāvi ..	.. 188-89 A.C. to 194-95 A.C.

The other kings with metronymics similar to that of Śatavāhanas do not concern the above chronology. Their place in the scheme of things will be found discussed in Appendix B of this essay. It will be evident that the above chronology fits in extremely well with the known facts about Śātakarṇis and their relations with the Śakas.

16. We may now proceed to discuss other evidence bearing on Sātakarṇi chronology. As noted previously, they are derived from the inscription of Kharavela at Hāthigumpha and from the Pauranic chronology of Śuṅgas, Kaṇvas and Mauryas. Both lines of approach require that there should be some definite

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point from which to measure the interval. The best fixed point for this purpose is furnished by the accession of Candragupta Maurya to the throne of Magadha.

The date of this event has been generally taken to be 321-22 B.C. on the ground that (*a*) Candragupta came to the throne after Alexander's invasion of the Punjab and (*b*) that he was ruling over India when Seleucus tried to win back Alexander's lost dominions. The Indian and Greek data relevant to the matter has been examined at some length by Lassen and others and the conclusions regarding the upper limit of Candragupta's accession rest essentially on the same.[1] The analysis is however vitiated by the fact that the scholars depended on the misreading in Justin—"Alexandrum" in place of "Nandrus"[2] as supporting Plutarch's statement regarding the presence of Androkottos in Alexander's camp.[3] The underestimation of the value of the tradition preserved in the Mudrārākṣasa also led to reliance being placed on statements which will be shown below to be untrustworthy on this point.

The statement of Plutarch referred to above, is as follows:—

"Androkottos who was then but a youth, saw Alexander himself and afterwards used to declare that Alexander could easily have taken possession of the whole country; since the king was hated and despised by his subjects for the wickedness of his disposition and meanness of his origin."

On the face of it, the latter part of the statement regarding Alexander's chances of conquest seem to be unreliable, in as much as the information about Candragupta after Alexander's times was derived from Megasthenes. The latter was an envoy at Candragupta's court from the defeated monarch Seleucus, and statements like "afterwards used to declare, etc.," look extremely untrustworthy in such case. Apart from this however, there is sufficient evidence to show that Plutarch's statement has no more value than an idle tale.

The other historians of Alexander do not mention anything like the alleged meeting of Candragupta and the Macedonian. Justin who mentions Candragupta's humble birth, his flight from Nanda to escape his wrath, the omens of his future greatness and also of his rule contemporaneously with Seleucus,[4] has nothing to say about this remarkable circum-

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[1] Lassen, *Indische Altertumskunde*, Vol. II. Leipzig, 1876.
For his discussion of Justin, whom he quotes, see p. 207, note 3; for Plutarch, see note 2 of the same page.

[2] W. McCrindle, *The Invasion of India by Alexander the Great as described by Arrian;* Q. Curtis, Diodoros, *Plutarch and Justin.*
Justin—Book 12, Cap. VIII, Footnote to page 327.

[3] *Ibid.*, Plutarch, Cap. LXII.

[4] McCrindle, *Ibid.*; Justin; Book 12, Cap. VIII.

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stance. Diodoros and Curtius do not mention it and agree in putting the account of the low origin and unpopularity of the reigning king of the Prasii and the Gangaridæ in the mouth of Porus.[1] Arrian in his Anabasis states nothing about this ruler beyond the power of his army, but in the Indika, he makes the following statement apropos of previous foreign invaders of India.

"However they admit that Alexander came and overcame in battle all the nations whom he visited and that he had conquered them all if his army had been willing."[2]

This statement of Arrian shows it to have been a general view current among Greeks regarding the opinion of Indians on the respective strength of Indian States and Alexander's empire. It is practically the same as that which Plutarch puts in the mouth of Candragupta, regarding this point. This portion of Plutarch's statement regarding alleged views of Candragupta therefore turns out to have been foisted on that monarch although the actual opinion was of Greek admirers of Alexander. The other part of Plutarch's statement being totally unsupported, loses correspondingly in value.

Except on this point of Candragupta's presence in Alexander's camp, the statements about the ruling sovereign whom Alexander's army was not prepared to fight, are however the same in Plutarch as in others and thus support each other on those points. According to Diodoros and Curtius.—

(*a*) This ruler was very powerful.[3]
(*b*) His name was Xandrames (Diodoros) or Agrammes (Q. Curtius).
(*c*) The king had overthrown and killed his predecessor and his sons, and occupied their throne.
(*d*) The predecessor had stood in the relation of father to him but was not really his father, the usurper being the illegitimate issue of this predecessor's queen by her paramour.

The name Xandrames is equivalent to Candramas just as Sandrocoptos stood for Candragupta. Agrammes was probably a corruption of the same order as Androkottos.

Therefore the available information from Greek sources show that the ruler of Magadha at the time Alexander's defeat of Porus (326 B.C.)—

(*a*) was of name Candramas, or something like it;
(*b*) had overthrown and killed his predecessor and his sons, usurping the throne;

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[1] *Ibid.*, Diodoros, Book 17, Cap. XCIII, Curtius Book 9, Cap. II.
[2] *Arrian's Indica* (Translation by E. J. Chinnock, Cap. IX, pp. 410, London, 1893).
[3] Arrian also mentions this. See McCrindle, *Ibid.* Arrian Book 5, Cap. XXV.

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(c) was the illegitimate child of his predecessor's queen, being looked upon as a sort of son to the former ruler.

Although this king of Magadha has been identified with Dhanananda of the Mahāvaṁśa account, there do not appear to be any grounds for doing so, as will appear from an examination of the relevant data.

First of all let us find out the kings who are possible as rulers of Magadha in 326 B.C. The identification of Candragupta Maurya with Sandrokoptos who repulsed Seleucus is a piece of definite information which enables us to do so on the basis of contemporary evidence. As Seleucus was on his way back from the Indian campaign in 302 B.C. to join in the war that led to the overthrow of Antigonus at the battle of Ipsus in 301 B.C., the lower limit for the Indian invasion comes out as 303 B.C. The upper limit is probably fixed by 306 B.C. when Seleucus assumed the title of king. The actual date of the invasion has been taken as 304-5 B.C.[1] As Candragupta was visited several times by the envoy of Seleucus, Candragupta may be taken as ruling in 303-4 B.C.

According to the unanimous evidence of the Purāṇas, as well as of the Buddhist chronicle Mahavaṁśa and the Jain account Sthavirāvali carita, the predecessors of Candragupta were the Nandas whom he overthrew.[2] This agrees also with the statement of the foreign authority Justin. The lowest estimate of the reign of the Nandas in the different chronicles is 22 years. As Candragupta was powerful enough in 304-5 B.C. to repulse Seleucus, it is apparent that the lower limit for his accession and overthrow is earlier than this date. Hence the Nandas are the earliest possible rulers in 326 B.C. according to the unanimous evidence of Indian and foreign authorities. But Candragupta is himself given a reign of 24 years in all the Indian chronicles. As he seems to have been ruling in 303-4 B.C. the upper limit of his accession comes out as 326-27 B.C. In other words he is the latest possible ruler in 326 B.C.

We have therefore to select the actual ruler in 326 B.C. from among Candragupta and the Nandas. The latter formed two generations, the father and the sons. Their succession was apparently peaceful. The earlier Nanda is described as the legitimate son of a previous sovereign by his Sudra wife in the Purāṇas[3]—though not in the Buddhist and Jain accounts. The Purāṇas however recognise no violent overthrow of his prede-

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[1] Cambridge History of India, Cap. XVII, p. 430, Vol. I.

[2] *Mahāvaṁśa*, Turnour, Ceylon, 1837.
Introduction pp. XXVIII to XLII.
Sthavirāvalicarita by Hemacandra (H. Jacobi's edition) Calcutta, 1891, Cantos VI—VIII.

[3] Pargiter: *Dynasties of the Kali Age*, pp. 24–26.

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cessor by any of the Nandas.[1] The only break in the succession of rulers about this period is in fact the destruction of the Nandas by Cāṇakya and the placing of Candragupta on the throne—circumstances which are corroborated by the Jain and Buddhist chronicles. Regarding the origin of Candragupta, the Purāṇas are silent. The Mahāvaṃśa ascribes his descent to a prince of the Śākya race.[2] As however this chronicle is of Ceylon and was compiled by Buddhists of that country after Aśoka's championship of Buddha's religion, and as it mentions the Indian king quite incidentally, this piece of information requires corroboration. Maurya is here derived from Moriya, the name of the family of the Śākyas to which Candragupta's descent is ascribed. In the Sthavirāvalicarita, Candragupta is described as the daughter's son of the keeper of Nanda's peacocks.[3] The connection of the name Moriya with peacocks is found here as well as in the commentary of the Mahavaṃsa, though not in the text.

A different and apparently much more authentic tradition appears to have been preserved in the Bṛhatkathā, composed in the Pisāca language, under the Sātavāhana king of Pratiṣṭhana. Of the original nothing has survived. Fragments, purporting to be taken from that work are however quoted in some authors. There are also two abridgements based on the original.[4] Further, the play Mudrārākṣasa (composed about 700 A. D. or earlier) is said to be based on Bṛhatkathā.[5] According to this dramatic work, the Brahman Cāṇakya had been deeply insulted by king Nanda, in revenge for which, he uprooted the latter's family, consisting of king Nanda and his progeny,[6] and placed Candragupta on the throne. The latter was of no pedigree (Kulahīna)[7] but from his childhood had given proof of his future greatness.[8] Although described as

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[1] *Ibid.* The overthrow of the old Kṣatriya kingdoms and the establishment of his own suzerainty by Mahāpadma Nanda cannot of course be meant. The known synchronisms of the Mauryas approximate though they are, make it impossible for Mahāpadma Nanda to have come to the throne just before Alexander's invasion.

[2] *Mahāvaṃśa*, Turnour, *Ibid.*

[3] *Sthavirāvalicarita*, Jacobi, *Ibid.*

[4] Kathāsaritsāgara of Somadeva. [The references given in this essay are to the edition of Durga Prasad (Nirnayasagar Press, Bombay, Saka 1811)] and Kathāmanjari of Kṣemendra.

[5] Regarding the reliability of the plot of the Mudrārākṣasa, see V.A. Smith, *The Early History of India* (revised edition of 1924) p. 45, footnote (1) agreeing with Hillebrandt's view that the plot is based on accurate information and ancient court tradition See also *Cambridge History of India*, vol 1, p. 471.

[6] *Mudrārākṣasa, Edition of K. T. Telang*, Bombay, 1884. (Bombay Sanskrit Series No. XXVII, pp. 25, 27, 29, 30, 119 and 143.)

[7] *Ibid.*, p. 76, "*pṛthivyām kim dagdhās prathitakulagā bhūmipatayas pati pape mauryam yadasi kulahīnam vṛtavatī.*"

[8] *Ibid.*, p. 273.

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the son of Maurya[1] he is considered practically a member of the kula of Nanda.[2] Rākṣasa, the minister of Nanda, is said (to be likely) to be considered as having come (to Candragupta as minister) in the paternal succession, thereby[3] suggesting that the relationship between Nanda and Candragupta was looked upon as of father and son. This is explicitly stated later on.[4] Candragupta, according to the drama, therefore passed for a son of Nanda, although really the son of one Maurya, and of no pedigree, *i.e.*, an illegitimate child.

It follows therefore that he was held to be the issue of the illicit union of Maurya (or a Maurya) and the queen of Nanda. That Candragupta passed for a son of Nanda was known to the commentator of Viṣṇupurāṇa[5] as well as the annotator of Mudrārākṣasa,[6] although the actual details given by them regarding the origin are erroneous. The derivation of Maurya (Candragupta) from Murā, a queen of Nanda is purely grammatical and is in glaring contradiction to the definite statements in the play. The phrase pūrvananda sūta in the quotation purporting to be from Bṛhatkathā is also in agreement with the conclusions drawn regarding Candragupta's origin in as much as he passed for a son of the pūrvananda, *i.e.*, the Nanda of the earlier generation who had preceded the several brothers who belonged to the succeeding generation. A somewhat different explanation of this phrase has been offered but that seems to be unnecessary.[7]

The above pieces of evidence from the Sanskrit (and Pisāca) works receive unexpected confirmation from ancient Tamil literature. In a number of works of ancient Tamil, considered to date from the first century after Christ,[8] there are references to the Mauryan invasion. In one of their

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[1] *Ibid.*, p. 76, "*Ānandahetumapi devamapāsya nandam saktāsi kim kathaya vairiṇi mauryaputre.*"

[2] *Ibid.*, p. 158, *nandāṇvaya evāyam* (in speech of Malayaketu referring to Candragupta).

[3] *Ibid.*, *Candragupto pi pitṛparyāyāyāta evāyamiti samdhimanumanyeta.* (Referring to Rākṣasa.)

[4] *Ibid.*, p. 169, "*tastu khalu nandakulamanena pitṛbhūtam ghātitam*" (Rākṣasa on reason of discontent of supporters of Nandakula under Candragupta); p. 218: "*Mauryosau svāmiputras*" (Malayaketu to Rākṣasa.)

[5] That Candragupta was not really of Nandakula is however made clear by Rakṣasa's speech. See also pp. 29-30,99 and 102 regarding their extinction.

[5] *Viṣṇupurāṇa*, H. H. Wilson, pp. 469 note.

[6] *Mudrārākṣasa*, *Ibid.*, pp. 4-5, slokas 27–35.

[7] Hārit. K. Deb: *J.B.O.R.S.*, Vol. III, 1917, pp. 91–5.

[8] Kanakasabhai: *Tamils 1800 years ago.*
Cambridge History of India, Vol. I, XXIV. Although the dating has been questioned by other Tamil scholars, the point is not very important as the arguments regarding Candragupta and Mauryas are not affected by a difference of 3-4 centuries in the date of Tamil records.

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expeditions they came to the assistance of a people called Kosar, apparently their allies when the latter were repulsed by the chief of Mohur. These Mauryas are termed "Vamba-Moriyar" or "bastard Mauryas."[1] Dr. Barnett in the chapter on South India in the Cambridge History of India has taken the above terms to refer possibly to Konkani Mauryas.[2] That this is not so, and that the great Maurya emperors are meant is made abundantly clear by the reference to Nandas and their capital at Patali (putra) on the Ganges,[3] by the same author shortly afterwards. It is therefore evident that the description in the Greek accounts, of the ruler of Magadha whom Alexander's army refused to fight, agree in every detail with the traditions current in India at about the same period, about Candragupta. As previously pointed out, the name recorded in the Greek account, is very like that of the Maurya king Candragupta.

It has therefore to be admitted that Candragupta had overthrown the Nandas and was on the throne of Magadha at the time of Alexander's victory over Porus. The practical independence of the frontier princes, the ambitious schemes of Porus, and the discontent among the subjects against the ruler of Magadha, mentioned by the Greek writers, shows that at the time Candragupta had not been able to consolidate his position. He was probably then busy putting down the disaffection among his allies and winning over the adherents of Nandas in which object, according to the play Mudrārākṣasa, he succeeded within a short period of time owing to the cleverness of his minister. Candragupta's accession thus comes out as having taken place shortly before Alexander's defeat of Porus. The actual date may therefore be taken as 327 B.C. with a very small probable error. This is in agreement with the upper limit of 326-27 B.C. for Candragupta's accession, arrived at from independent data.

17. The date of accession being thus sharply defined as 327 B.C, we may proceed to calculate other dates with reference to it. A very important document, of which the chronological value has been undervalued by some scholars is furnished by the Hāthigumpha inscription of Kharavela.

The fourteenth line of the inscription contains an undoubted reference to the time of the Mauryas,[4] although

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[1] *Tamils 1800 years ago*, Ibid, pp. 50-51, and 198 quoting Mamulanar, 250.

[2] *Cambridge History of India*, Vol. I, p. 596.

[3] S. K. Aiyangar; *Some contributions of South India to Indian Culture* (Calcutta, 1923) pp. 23-27. *Mamulanar Aham*, 251 and 264.

[4] K. P. Jayaswal and R. D. Banerjee, *J.B.O.R.S.*, 1918 (Dec. 1917). The text of the Hathigumpha inscription is given on pp. 397–403 of Mr. Jayaswal's article. The 16th line runs as follows: "Muriyakālam vochhimnam cha choyathi agasatikāmtariyam upādāyati-Muriyakālam

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objections have been raised to this reading by Mr. R. P. Chanda and others.[1] The principal difficulty raised seems to have been the conclusions regarding dates drawn from it by Prof. Jayaswal. He has taken this line to mean that an interval of 164 years elapsed between the time of Candragupta and the 13th year of Kharavela when the inscription was engraved. This is however an obviously wrong interpretation. The actual sentence shows that the interval of 164 years was "vyvacchinnam," *i.e.*, separated, from the time of the Mauryas, thus excluding the ruling period of the Mauryas. Hence the reckoning should be from the date of the ending of the Maurya dynasty. As regards the duration of this dynasty, all the Purāṇas agree that it lasted 137 years. The more reliable Vāyu and Brahmāṇḍa Purāṇas give an actual total of regnal periods of 133 years.[2] As Aśoka is said to have been crowned four years after the death of his father, the discrepancy between the two actually supports the correctness of the accounts. We may therefore take 137 years as the duration of this dynasty. Subtracting this from the date of accession of Candragupta we obtian 190 B.C. as the date from which to count the interval of 164 years. Kharavela's thirteenth year therefore corresponded to 26 B.C. The date of his accession therefore comes out as 38 B.C.

On palæographic grounds, the Hāthigumpha inscription of Kharavela and the Nānāghat inscription of Naganika, the queen of Śātakarṇi have been held to belong to the same period to which belongs the Nasik inscription of the time of Kṛṣṇa.[3] A reference to the chronological tables of Śātavāhana kings reconstructed on the basis of other data, shows that rule of Kṛṣṇa was from 52-51 B.C. to 43-42 B.C. and of Śrī-Śātakarṇi (of the Nānāghat inscriptions) from 42-41 B.C., in remarkably close agreement to the palæographic data. The reference in the 4th line of the Hāthigumpha inscription has been taken to mean a reference to the Śātakarṇi of the Nānāghat inscriptions, *i.e.*, to Śrī-Śātakarṇi. An invasion in defiance of the latter in the second year of Kharavela's reign would be in 37 B.C., *i.e.*, about the middle of the reign of Śrī-Śātakarṇi. The language shows that Kharavela did not attack Śātakarṇi actually. Kharavela's campaign of universal (Indian) conquest was undertaken in his tenth year, *i.e.*, 29 B.C.

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vyavachchhinnam cha chatuṣaṣṭyagraśatikāntarīyam upādāpayati." Mr. Jayaswal has recently put forward another reading, apparently on account of his inability to solve the chronological difficulties raised by his interpretation (see *J.B.O.R.S.*, 1927, pp. 221–246).

[1] *J.R.A.S*, 1919, pp, 395–99, I. A., Vol. XLVII, 1918, pp. 223-24, Vol. XLVIII, 1919, p, 187–91.

[2] Pargiter, *Dynasties of the Kali age*, pp. 27.

[3] *Archæological Survey of Western India*, Vol. V, p. 71 (Bühler).

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and therefore after the death of Śrī-Śātakarṇi. The reference to the Nanda king (in line 6 of the inscription) who ruled three hundred years before (the fifth year of Kharavela) raises no difficulty as the date referred to comes out as 334 B.C., when the Nandas are known to have been rulers of Magadha, and according to the testimony of the Purāṇas, to have established universal sway.[1] The reference to the attack on Rajgṛha in the eighth year of his reign and the consequent flight of its ruler to Mathura, and the forcing of Bahasatimitra king of Magadha to acknowledge his overlordship in the twelfth year of his (Kharavela's) reign shows that in 31 B.C. and 27 B.C., in addition to his great campaign of 29 B.C., he aimed at the subjugation of Magadha and an acknowledgment of overlordship from its ruler. There is therefore no question of identification of Bahasatimitra with Puṣyamitra involving extraordinary difficulties of chronology and palæography.

It may be said that the above hypothesis is open to objection as the Bahasatimitra of the Pabhosa inscription ruled, according to Mr. Jayaswal, at a much earlier date, being of the time of the Śuṅga king Odraka or Andhraka.[2] This date of Bahasatimitra is however based on a wrong identification.

The Hāthigumpha inscription makes it clear that Bahasatimitra was ruler of Magadha, as the successor of Nandas, at the time (possessing the trophies carried by the Nandas from Kalinga). The finds of the coins of this king, Bahasatimitra, at Kosam and Ahicchatra as also the genealogy given in the Pabhosa inscription shows that he was lord of the above two kingdoms. His flight from Rajgṛha to Mathura to escape Kharavela agrees with the above facts. It is therefore apparent that Bahasatimitra ruled over the realm of the imperial Śuṅgas in North India, excluding only Vidiśā. Very little room is left for his supposed overlord of the Śuṅga line of whom the Pauranic name is not Udaka but only bears a resemblance to it.

On the other hand it is clear that the Pabhosa inscription was recorded in the tenth year of a king termed Odraka or Udraka. When therefore we find that in the eighth year of Kharavela, Bahasatimitra has to flee to Mathura; in the tenth year the king Kharavela goes forth on a victorious career of conquest of India presumably overrunning Magadha and Kosam; in the twelfth year. Bahasatimitra makes full submission to Kharavela and recognises his overlordship and that Kharavela is lord of Odra or Udra [2] we are more likely

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[1] Pargiter, *Dynasties of the Kali Age*, p. 25.

[2] The above suggestion regarding the Pabhosa inscription has been made only to point out that Mr. Jayaswal's interpretation does not agree with the available facts and therefore forms no real objection to the

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to conclude that the reference to the tenth year of Udraka by the uncle of Bahasatimitra, is to the time when Kharavela had overrun Northern India. This agrees with the chronology arrived at previously on other considerations.

The palaeographic evidence regarding the Pabhosa inscription agrees with the above conclusions. Hoernle, working on an eye copy, judged the characters to belong to about the beginning of the Christian era. Führer with more accurate data based on actual inspection considered the inscriptions to be in characters "of the second or first century B.C." Numismatists have placed the early Kosam coins in the third or second century B.C.; but there appears to be no ground for concluding that the coins of this particular king cannot be placed in the first century B.C. The coinage of the kings of this realm extended over a space of about three hundred years beginning with the period indicated.

The evidence of the Hathigumpha inscription is therefore clearly in favour of the chronology of Śātakarṇis, arrived at in this essay.

18. It may however be objected that the dating leaves no room for the reign of Śuṅgas and Kaṇvas as made out in the Purāṇas. This point may now be discussed. All the Purāṇas state (taking the corrected reading of Matsya) that the Śuṅgas ruled 112 years, while giving an actual total of 118 years. The Kaṇvas are said to have ruled 45 years, the total agreeing with the actual periods.[1] This gives us 163 years for the two sets of rulers. The interval between the end of the Maurya line and the coming of the Andhras is however according to the chronology of this essay only 115-16 years. The interval between the Mauryas and Andhras has been taken by most Indologists as filled by the Śuṅga rule, the Kaṅvas being considered contemporaries of the former.[2] While this agrees fairly well with the chronology of this essay, there is a very serious objection to it. It has been shown that, barring the statement of relationship of the kings, the Pauranic account of Śātakarṇis is very accurate. Therefore, when we meet with a clear statement in all the Puranas that the last of the Śuṅgas, Devabhūmi was killed by his minister Vāsudeva who thus became the first Kaṇva king,[3] we have to conclude that the Kaṇvas did not attain supremacy before Devabhūmi's time. Therefore the Kaṇvas must have ruled after him there-

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conclusions of this essay. The correctnesss or otherwise of the interpretation of the term "Udakasa" suggested does not affect the main conclusions of this essay.

[1] Pargiter, pp. 30–35.

[2] Sir R. G. Bhandarkar. *Ibid.*, pp. 30-31. *Camb. History of India,* Vol. I.

[3] Pargiter: *Ibid.*, pp. 33-34. See also *Harsacaritam* (Edition of Pandit Iswara Chandra Vidyasagara, Calcutta, 1883) pp. 173.

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by making it impossible to accept the current view regarding Śuṅga-Kaṇva chronology. At the same time it is clear that if the other conclusions of this essay are correct, there must have been an addition of contemporary reigns so as to make a total of 163 years in place of the 115-16 years deduced from the Maurya-Andhra dates. To settle this point we have to examine the inscriptions, coins and mentions in literature about these rulers. Of the Kaṇvas we know nothing beyond the information supplied by the Purāṇas. The case is different with the Śuṅgas.

The drama Mālavikāgnimitra, (Circa 400 A.D.) written at a time when the tradition of the imperial Śuṅgas was still fresh in the minds of the Brahmanical people, portrays a love intrigue of king Agnimitra, son of Puṣyamitra the founder of the line. According to this work, Agnimitra was a king of Vidiśā. He waged a war and concluded treaties like an independent king,[1] while his father Puṣyamitra was busy performing the Rājasuya to obtain recognition as the paramount power of India as the successor of the Mauryas. His title at the court of his son is however senāpati, not king like his son.[2] The Ayodhya inscription of a descendant of Puṣyamitra[3] also mentions him as senāpati and as performer of the Aśvamedha. It has therefore to be concluded that before seizing the throne of Magadha, Puṣyamitra had no right to the royal title although his son held that dignity. Some scholars have sought to explain this peculiarity of titles of the two Śuṅgas by suggesting that Puṣyamitra seized the throne of Magadha in his son's name. This view is however untenable in as much as (a) the Aśvamedha was performed by Puṣyamitra and not his son, (b) the Purāṇas and other Sanskrit works mention him as the first king of the line and (c) from the narrative in the drama, Agnimitra seems to have been a king, for quite a long time before the performance of rājasuya which obtained the recognition of Śuṅgas as overlords of India. We have therefore to conclude that Agnimitra's crown did not come to him from his father and that the latter was not a king although the son held the royal dignity. The Ayodhya inscription previously referred to, styles the father of Kauśikīputra dharma rājan Dhanadeva, lord of Kośala, merely as Phalgudeva. As the inscription records the setting up of a staff by the royal son in memory of the father, there is no question of carelessness or disrespect. It clearly shows that in this case also, the son did not inherit the crown from

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[1] *Mālavikāgnimitra, Edition of Shankar Pandit,* Bombay, 1869. pp. 8-9 and 105.

[2] *Ibid.*, pp. 106-7.

[3] N. C. Majumder. *Annals of the Bhandarkar Institute,* 1925-26, Vol. VII, pp. 160–63. See Appendix A.

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his father. If the Pauranic lists are looked through it will be found that the successor of Agnimitra is not given as his son Vasumitra, although the latter's name also occurs as that of a king. As, in the case of the Śuṅgas, no less than five out of ten kings are mentioned as sons of their predecessors in the Purāṇas and as Vasumitra was known to much later writers as son of Agnimitra,[1] it follows that there cannot be any question of mistake. The successor of Agnimitra was therefore not his son.

We therefore see that in a number of cases where sufficient details are available the succession to the crown was not from father to son among the Śuṅgas. We have already seen Dhanadeva styling himself Kauśikīputra, though nothing is said of his father's gotra. If we look up other royal inscriptions of the time of Śuṅgas, we find the same use of metronymics :—

Lüders' List Nos. 687 and 688 :—

Bharaut Inscription of Vātsīputra Dhanabhuti son of Gauptīputra Angāradyuta, grandson of rājan Visvadeva Gaṛgīputra during the reign of the Śuṅgas.

Lüders' List No. 869, (Bharaut) :—

Kumāra Vādhapala son of rājan Dhanabhuti.

Lüders' List No. 125, (Mathura) :—

Vādhapāla Dhanabhuti Vātsīputra....of Dhanabhuti.

Lüders' List No. 94, (Mathura) :—

Śivamitra the son of Kauśikī, [wife] of a Gauptīputra.

Lüders' List No. 904 and 5, (Pabhosa) :—

Āṣāḍhasena, son of Gopālī, of Vaihadari, mother's brother of king Bāhasatimitra son of Gopalī.

Āṣāḍhasena son of Vaihadari and king Bhāgavata, son of Tevani and Vangapāla son of Śonakāyana and king of Ahicchatra.

The inscriptions show that the royal families at Bharaut and Mathura were connected. The Mora inscription[2] taken with the Pabhosa record reveal a connection between the rulers of Mathura and Kosam at the time of Bahasatimitra and also of his predecessors. The records are therefore of a closely connected group of people who formed the ruling aristocracy under the Śuṅgas.

The record of Āṣāḍhasena mentions his great grandfather Śonakāyana, a term which can be used only by the twice-born people of Vātsya gotra. Therefore, they like the Śuṅgas were or claimed to be twice born.[3]

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[1] *Mālavikāgni Mitram, Ibid.*, p. 107 *Harṣacaritam, Ibid.*, p. 173.

[2] Vogel : *J.R.A.S*, 1910-11, p. 120.

[3] Mahāmahopādhyaya Haraprasad Śastri, *J.P.A.S.B.*, 1912, p. 267. Jayaswal : *J.B.O.R.S.*, 1918, p. 257. See "*Principles of Gotra and*

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As the Ayodhya record of Dhanadeva shows, a descendant of Puṣyamitra also used the gotra metronymic. The Śuṅgas and their feudatories (who were very probably related to them) therefore had this practice in common; in other words they were members of the same social group.

We may now examine the metronymics in details. Although Vatsîputra has been taken to mean son of a princess of Vatsa, by some scholars, it evidently means the gotra of the mother as well, like the other terms Gargīputra and Kauśikīputra. Again in all three cases where details are available, the gotra of the wife and of the mother are different (in case of the father and grandfather of Dhanabhuti and the father of Śivamitra). The mother's gotra was therefore not married into by these people. Finally, the Pabhosa record shows that the sister as well as the mother of Āṣāḍhasena had the same gotra, gopāli.[1] The placenames attached to the name of the mother of king Bhagavata and also of his wife make it clear that the term gopāli in the first inscription does not refer to any locality but to gotra. Therefore, the gotra of the daughter came to her from her mother. We have already seen that the son also mentioned the gotra of the mother, ignoring that of the father. The conclusion is that the gotra was matrilineal. The avoidance of the mother clan in marriage agrees with this inference.

19. We have already discussed the significance of the occurrence of such metronymics in royal and princely records when discussing the Śātakarṇis. The same ground need not therefore be covered again. Here it is sufficient to note that in view of the facts that, (*a*) among Śuṅgas the succession was not from father to son in those cases where we can say anything about the matter, (*b*) among them and also their feudatories (who formed a homogeneous group with them), the gotra was matrilineal, (*c*) metronymics are used in royal and princely records but the father's gotra is not mentioned,—it may be concluded that royal or princely succession was through females, the actual ruler however being a male. The succession may therefore be taken as from mother's brother to sister's son unless otherwise indicated. As in the case of Śātakarṇis, the sons of kings have come in owing to the patrilineal tradition of the society from which the Purāṇa writers came.

The genealogy, succession and regnal periods given by the three Purāṇas are as follows (correcting minor errors).

Pravara" P. Chentsal Rao. (Mysore, 1900) pp. 57, 29, and Kāśikā: (Commentary on Panini's text); Benares, 1898. (Edn. of Pandit Bāla Śāstri) IV, 1, 102, page 279 and IV, 1, 117, p. 282. (For Śonakāyana and Śauṅga respectively.)

[1] See "*Principles of Gotra and Pravara*"—P. Chentsal Rao, p. 118.

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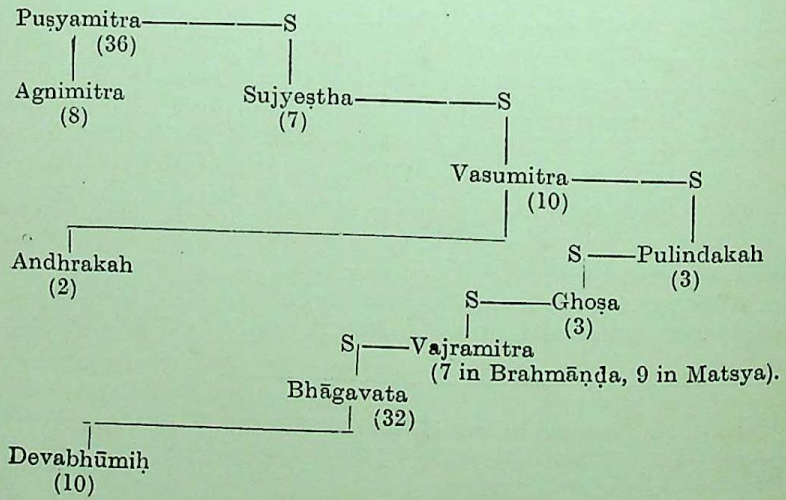
Matsya.	Vāyu.	Brahmāṇḍa.
Puṣyamitra (36)	Puṣyamitra (36)	Puṣyamitra (36)
Vasujyeṣṭha (7)	Agnimitra (8)	Agnimitra (8)
	Sujyeṣṭha (7)	Sujyestha (7)
Vasumitra (10)	Vasumitra (10)	Vasumitra (10)
Antakah (2)	Andhrakah (2)	Bhadrah (2)
Pulindakah (3)	Pulindakah	Pulindakah
Yomegha (3)	Ghoṣah (3)	Ghoṣah (3)
(Some possible misreading of Ghośa occurs in a few MSS.)		
Vajramitra (9)	Vajramitra (probably (7)	Vajramitra (7)
Samābhāgaḥ (32)	Bhāgavat (32)	Bhāgavat (32)
Devabhūmiḥ (10)	Devabhūmiḥ (10)	Devabhūmiḥ 10)

It is evident that the Vāyu and Brahmāṇḍa lists are fuller; also that the Vāyu cannot be trusted in the matter of relationship unless supported by one of the other Purāṇas. Vasumitra known to be son of Agnimitra from other sources is shown as son of Sujyeṣṭha. Ghośa will not therefore be considered as son of Pulindaka. The name and genealogy of the fifth ruler seems however to be better preserved in the Vāyu than in the Brahmāṇḍa. The succession may now be put down :—



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Andhrakaḥ and Devabhūmiḥ were apparently kings of Vidiśā like Agnimitra and not emperors.

The chronology may be obtained from the date of overthrow of the Maurya empire previously ascertained. It comes out as follows :—

Serial No.	Name.	Regnal Period.	Dates.
1.	Puṣyamitra ..	36	190 B.C. to 155 B.C.
3.	Sujyeṣṭha ..	7	154 B C. to 148 B.C.
4.	Vasumitra ..	10	147 B.C. to 138 B.C.
6.	Pulindakah ..	3	137 B.C. to 135 B C.
7.	Ghośa ..	3	134 B.C. to 132 B.C.
8.	Vajramitra ..	7 (Bd 7)	131 B.C. to 125 B.C.
		[(Ma 9)	131 B.C. to 123 B.C.]
9.	Bhāgavata ..	32	124 B.C. to 93 B.C.
		[(Ma)	122 B.C. to 91 B.C.]

The total regnal period comes out as 98 or 100 according to the number of years allotted to Vajramitra. The smaller total is probably more correct as the Brahmāṇḍa has generally been found to be more accurate than the Matsya Purāṇa.

The Besnagar pillar inscription of the ambassador of Antalciades shows him to have been reigning at Taxila in the fourteenth year of Bhāgavata. As Antalciades came to the throne circa 120 B.C.[1] the dates agree excellently.

20. One curious conclusion which comes out from the above hypothesis of succession is that the ruler assassinated by the founder of the Kaṇva line, was not the Śuṅga emperor but his son, the ruler of Vidiśā, the kingdom of Agnimitra. This agrees with the facts that :—

(*a*) The overthrew of Devabhūmīḥ and usurpation by Vāsudeva Kaṇva did not wholly destroy the power of the Śuṅgas.

(*b*) The Śātakarṇis who overthrew the Kaṇvas were a southern power, showing that the kingdom taken away from Kaṇvas was in Central India. This agrees with the extent of the rule of Śātakarnis attested by their coins and inscriptions.

All that Vāsudeva seems to have done, in fact, seems to have been to force the acknowledgment of suzerainty of the other Śuṅga rulers (Śuṅgesu Carita nṛpah).

This and the succeeding portion of the discussion is necessarily hypothetical owing to lack of data. For a justification of the views put forward in this essay, it is however necessary to reconstruct not only the changes in this period but those of the time of the Kaṇvas. The only test of correct-

[1] Cambridge History of India, Vol. I, p. 522.

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ness will be the agreement with the other conclusions and the history of the period in general. Bearing this in mind, the discussion of the Pauranic data on the Kaṇva rule may be taken up.

As before, the discrepancies and agreements between the different accounts furnish some guide in drawing up a hypothetical picture of the actual events. While the total ascribed to this dynasty is the same in all the accounts (45 years), the regnal periods vary. The actual total of the Brahmāṇḍa and Matsya comes out as 45. The Vāyu gives an actual total of 55—which in the face of the general agreement regarding the total must be considered as due to inaccurate recording of the regnal periods in the Vāyu. The succession and regnal periods may now be considered in detail. The different accounts are as follows :—

Matsya.	Vāyu	Brahmāṇḍa.
Vāsudeva	Vāsudeva	Vāsudeva
(9)	(9)	(5)
Bhūmimitra	Bhūmimitra	Bhūmimitra
(14)	(24)	(24)
Nārāyaṇa	Nārāyaṇa	Nārāyaṇa
(12)	(12)	(12)
Suśarman	Suśarman	Suśarman
(10)	(10)	(4)

It is evident that the regnal period of Nārāyaṇa was 12 years but that there is doubt about the preceding and succeeding reigns. It is quite possible that an error may have crept into the number of years ascribed to the second king and this might have led to necessary alterations in the two other reigns Or it may be due to actual uncertainty of the regnal periods.

According to the Besnagar column of Bhāgavata, he was ruling there in his fourteenth year. The fragment found at Bhilsa shows him to have been in occupation of it in his twelfth year.[1] But according to the hypothesis of this essay, Bhāgavata was ruling elsewhere as the Śuṅga emperor, Vidiśā being governed by his son. We have however seen that Agnimitra was ruling as king at Vidiśā before his father had established his right to a crown. It is therefore not in itself improbable that Devabhūmih came to the throne of Vidiśā during the lifetime of his father. In that case, the presence of Bhāgavata at Vidiśā can be interpreted as a reconquest after the overthrow of Śuṅga rule by Vāsudeva. As the latter, according to all accounts, killed Devabhūmih and usurped the throne, the reconquest of Vidiśā must have terminated his rule. As Bhāgavata was in occupation of Vidiśā in his

[1] *J.B.B.R.A.S.*, Vol. 23, Lake, Besnagar, pp. 135–46.

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twelfth year and as he received an important embassy there in his 14th year, we may take it that Vāsudeva's rule ended before the twelfth year of the Śuṅga emperor. The successor of Vāsudeva is said to have ruled for 14 years according to one account and 24 years according to another. In either case his reign fell partly at least within the remaining 21 years of the reign of Bhāgavata. The third king is agreed to have ruled for 12 years. About the last king again, one version gives 10 years and the other only four. As the four generations of patrilineal Kaṇvas succeeded each other without a break, giving a total rule of 45 years agreeing with the actual sum of reigns, it is evident that the number of years of their rule which fall outside the sovereignty of Bhāgavata comes out as 15 or 19 years according to the different versions.[1] As Bhāgavata has been considered the last Śuṅga emperor, this period comes out as the actual length of independent Kaṇva rule. The Matsya account placed the reign of the second king wholly within Bhāgavata's rule of 32 years. The Brahmāṇḍa computation gives him a reign of 3 years outside this rule. It also places Nārāyaṇa's rule clearly outside Bhāgavata's time. As Bhūmimitra was recorded to be an independent sovereign, it is more likely that the Brahmāṇḍa computation, giving him some years of independent sovereign royalty, is nearer truth. The agreement regarding Nārāyaṇa's rule also supports this view. In this case we have to accept the Brahmāṇḍa computations of 4 years for Suśarman's and 5 years for Vāsudeva's reigns, to preserve the total of 45 years. The maximum total non-cotemporaneous reign of the Kaṇvas thus comes out as 19 years. This is very near the actual interval of 17-18 years left by the chronology of Śātakarṇis and Śuṇgas arrived at in this essay. The overthrow of Vāsudeva has therefore to be taken as having occurred in the 9th or 10 year of Bhāgavata. Accepting the Brahmāṇḍa computation of the length of the reigns, we get the following dates:—

Serial No.	Name.	Regnal Period.	Dates.
1.	Vāsudeva ..	5	120–119 B.C. to 116–115 B.C.
2.	Bhūmimitrah ..	24	115–14 B.C. to 92–91 B.C.
3.	Nārāyaṇa ..	12	91–90 B.C. to 80–79 B.C.
4.	Suśarman ..	4	79–78 B.C. to 76–75 B.C.

[1] The Vāyu version of the regnal periods is evidently a mix up of the two and its actual total does not tally with the stated total.

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Although the above restoration of the reigns of Bhāgavata, Devabhūmi and the Kaṇvas are mainly conjectural, it is evident that it is far more rational than the current view which considers the Kaṇvas as wholly contemporaneous with Śuṅgas and decries the Pauranic account because it goes against such an assumption. In addition, the hypothesis put forward has the merit of reconciling the conclusions, based on other data, about Śuṅga and Śātakarṇi chronology.

Before concluding this section, certain objections have to be met. It may be asked why only a few Śuṅga kings of Vidiśā are named in the Pauranic list and others are not. It is obvious that Agnimitra, Andhraka and Devabhumīḥ do not represent the whole line of royal rulers in Vidiśā. There must have been other kings—presumably not Śuṅgas—in between.

In the case of the Śātakarṇis it was found that alternate kings of each of the dual realms were related patrilineally in a peculiar fashion owing to the existence of the reciprocal form of cousin-marriage. Here we find that Vasumitra, the sister's daughter's son of Puṣyamitra (according to the hypothesis put forward) is also the son's son. This shows that Agnimitra had married his father's sister's daughter. Again, the son of Vasumitra was a ruler of Vidiśā. Normally, the successor to it in that generation should be the sister's daughter's son of Agnimitra. In Vasumitra's case also, we therefore have a presumption of marriage with the father's sister's daughter. Between Andhraka and Devabhūmīḥ there is a big gap. We also miss the rulers between Agnimitra and Andhraka. If these intermediate kings had been Śuṅgas in the patrilineal line, their names—on the hypothesis of this essay—might be expected in the Pauranic list. The absence of such names suggests that the kings who are not included were not patrilineally connected to their predecessors. In other words the reciprocal form of cousin-marriage was not rigorously practised. This agrees with the different political condition of the Śuṅgas. The Śātakarṇis, had two equally powerful line of kings, both of which had obtained the paramount position at different periods. In the case of the Śuṅgas, there was one imperial line, with powerful branches of kings who were not however of equal status with the emperors. Here the conditions would not favour the formation of a dual organisation. This can be made clear by a diagram. Let S represent the Śuṅga emperor and A, V, the kings of two powerful realms, say Ahicchatra and Vidiśā. Using the ordinary convention of capital for males and minor for females, we get the ruling families diagrammatically as follows :—

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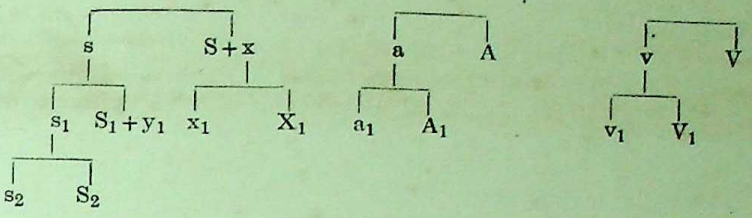
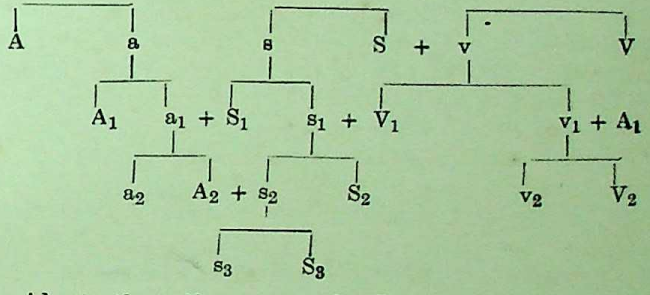


The Śuṅga emperor presumably married a royal princess, and his son X_1 would succeed to the kingdom of his mother's brother. The successor to the imperial throne would S_1, the sister's son. The next imperial ruler would be the son of s_1, sister of S_1. The king X_1 son of the emperor might naturally wish to have his son succeed to the imperial domain of his grand father. To secure this he has to marry his father's sister's daughter. In this, being son of the emperor, he is likely to be more successful than other kings. The heir-apparent S_1 would not however have any such predilection to marry the mother's brother's daughter x as he can secure a kingdom for his son by marrying any other royal princess. In other words, x_1 and y_1 would be princesses of different kingdoms. Let us put $x=v$ and $y_1=a_1$. Then we get a system of marriages like this :—



It is evident that if we put S=Puṣyamitra, we get V_1=Agnimitra, S_2=Vasumitra, S_1=Sujyeṣṭha, S_3=Pulindakah, the kingdoms being as postulated. It is further evident that the continuity of the Śuṅga line through males is preserved—though the succession is not from father to son. This is required by the fact that the emperors are called Śuṅgas and Śauṅgas in the Purāṇas. It is further apparent that the interval between two emperors in the same patrilineal line may occasionally be greater even, with a tripartite organisation. For, the son of an emperor may occasionally fail to marry his mother's brother's daughter For example, let A_2 fail to marry S_2, she being espoused by V_2. There being only three families, the father of V_2 would probably be A_1. For the same reason, the father's father of V_2 cannot be an emperor..

The evidence of the inscriptions support the view that the

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reciprocal form of cross cousin marriage was not practised. The records definitely prove that alternate generations of royal mothers did not have the same gotra—unlike what was found in the case of Śātakarṇis. The explanation of the apparent objection arising out of the peculiar absence of names of sons of emperors is therefore confirmed so far as the available data goes.

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APPENDIX A.

I. Nasik Inscriptions.

The Nasik inscription No. 14 (Lüders list No. 1126) has been taken by Senart (E.I., Vol. VIII) and Bühler (A.S.W.I. Vol. IV) to be a joint one of Gotamīputra and his mother on the strength of the interpretation given by them to the seventh line of the record. The line runs as follows :—

"Raño Gotamiputasa Sātakanisa mahādeviya cha jīvasutāya rājamatuya vachanena," etc.

But this inscription records clearly at the end that the "charter has been drawn up by Loṭā, the chief lady-in-waiting (to the queen mother) who received oral instruction and it has been done in writing by Pujiti on the 5th day of the 4th fortnight of the rainy season of the year 24."

The charter was drawn up "on the 10th day of the 2nd fortnight of the hot season of the year 24."

The point regarding oral instruction is emphasised in the body of the inscription in line 7 (quoted above) but there is no mention anywhere of any direction by Gotamīputra or any king like what we find in the other records. On the other hand if the portions (of line seven quoted) separated by the conjunction "cha" (=and) are translated as such we get :—

"By the (principal) queen of king Gotamīputra" and "mother of a king, the mother of a living son."

This refers clearly to the mother of Pulumāvi and wife of Gotamīputra.

The Nāsik inscription No. 18, which was recorded at the instance of Gotamīputra's mother, by her grandson Pulumāvi states the former relationship in line 9 as follows :—

"Siri Sātakanisa mātuya mahādeviya Gotamiya Bālasiriya" without dragging in Pulumavi's name.

The construction of the two relevant lines in the two records make it clear that there is no evidence of a joint inscription in the first. On the contrary, it is the record of a gift made by a queen in her own right (lines 8-9) the record being communicated to the officials through the queen's female attendant.

II. The Ayodhya Inscription.

Mr. N. G. Majumdar's translation of the inscription is as follows :—

"This staff in memory of Phalgudeva has been set up by his son the Dharma king (Dharmarājan) Dhanadeva, Lord

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of Kośala, son of Kauśikī and sixth in descent from Senāpati Puṣyamitra, who twice performed the Aśvamedha sacrifice."

The epithet "dharma" before "rājan" probably means "rightful" as in the compound "dharmapati."

I have followed Mr. Maĵumdar's, interpretation in preference to Mr. Jayaswal's, as being far more logical and in agreement with the available data about the inscription in question.

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APPENDIX B.

According to the chronology of this essay, the successors of Pulumāvi in the Paiṭhan kingdom ruled from 162—3 A.C. to—174-5 A.C.—assuming that there was no break in the rule in between. But the reign of Yajñaśrī extended beyond this, to—181-2 A.C. From the contemporary coin records of the descendants of Rudradāman, it would appear that they held the title Mahākṣatrapa, from time to time (B.M.C. No. 288 of M. K. Jivadāman is dated 178 A.C. His father had issued coins as Kṣatrapa as well as Mahākṣatrapa B.M.C. No. 281-5 and 286-7 respectively) at least, during Yajñaśrī's rule. The Surāṣtra coin of this monarch shows that his rule extended right into the dominions of these Mahākṣatrapas and that his son acted as Viceroy there on his behalf. These facts may be interpreted to indicate that the northern kingdom, had come to an end during Yajñaśrī's time, and that the latter had reconquered the lost dominions back from the Mahākṣatrapas. The fact that these silver coins of Yajñaśrī closely follow, as regards type, weight and size, the ordinary silver coinage of the Western Satraps, agree well with the above conclusions. A further piece of concordance is supplied by the inscription on the coin. The Viceroy's name and title are recorded as Gotamiputa kumaru yaña Sātakana (Chatar) panasa.

As Rapson has pointed out, the last part of the inscription "chatarpanasa" corresponds to the usual record of royal title. As the term "chatarpa" often occurs on records of the Kṣatrapas (in Kharoṣṭhi) to denote their title and as "Kṣatrapa" is held to be a derivative of ksatrapāvana, the term chatarpana turns out to be a derivative of the complete form of the title Kṣatrapa. The "Chatarpana" of the Nānāghat cistern inscription was therefore, also, a Kṣatrapa. The characters of this inscription are those of the period of Yajñaśri (Bhagwanlal Indraji, *J.B.B.R.A S.*, XV, p. 314). Taking into account the fact that the use of this title is unusual among Śātakarṇis, the two Kṣatrapas may be equated.

The Junāgaḍ inscription of Rudradāman refers to a marriage relation with the lord of dakṣiṇāpatha, Vāśiṣṭhīputra Pulumāvi. The inscription of the Śātakarṇi queen, apparently the daughter of Rudradāman, shows that the son-in-law of the Mahākṣatrapa was a Vāśiṣṭhīputra. The occurrence of the phrase "non-remoteness of relationship" with regard to Pulumāvi, rules out the possibility that the latter was the Vāśiṣṭhīputra mentioned in the Kāṇheri inscription—for such a description cannot be applied to a son-in-law by a Hindu monarch. Yajñaśrī and his uncle the great

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Gotamīputra have to be ruled out as they were not Vāśiṣṭhīputras. The Vāśiṣṭhīputra was presumably the heir-apparent of Pulumāvi. This is reasonable in view of the fact that the marriage was intended to promote friendliness (although unsuccessfully) between the Śaka Satraps and their neighbour the Paiṭhan kings.

According to the system of descent and succession proved in this essay, this Vāśiṣṭhīputra would stand in the relation of a son of Yaj̃ñaśri. The regnal year noted in the cistern inscription is 13. Apparently, none of the successors of Pulumāvi (No. 24) can be identified with him. As a working hypothesis, we may hold that shortly after his accession, he was reduced to a subordinate position by his marriage relations, the Mahākṣatrapas; that although he submitted and thus continued as a Kṣatrapa, this was not acquiesced in by the royal Śātavāhanas, who set up some other king (standing in the relation of brother to this ruler) as the ruler, over the remnant of the Paiṭhana kingdom. The succession in this reduced kingdom would be recorded in the Purāṇas, but they would not note the name of the subject king. The fact that the records of the Vāśiṣṭhīputra Kṣatrapa are in the north west part of the realm, nearest to the area of rule of the Śaka Satraps and that the coins and inscriptions of the successors of Pulumāvi are all in the Kistna and Godavery districts, agree with such a view. Subsequently when Yaj̃ñaśrī reconquered the lost territory, he seems to have allowed his son to continue to rule as before, as a Satrap under him. The northern kingdom apparently ceased to exist separately from this time. The recorded year of the Vāśiṣṭhīputra as a royal Satrap is 13—which covers the total of the reign of Śivaśrī Pulomā, Śiva skandha Sātaka and of Caṇḍa Śrī Śātakarṇi. The successors of Yaj̃ñaśrī probably had no hold over any part of the Paiṭhana kingdom. The coins of Mahākṣatrapa Rudrasiṃha son of Mahākṣatrapa Rudradāman extend from 181 A.C. to 196 A.C. (B.M.C. Nos. 296–304 and 317–23) with a short break at 188–190 A.C. (B.M.C. Nos. 306–10 and 313–16). The coins of Jivadāman, brother's son of Rudrasimha mention him as Mahākṣatrapa in 178 A.C. (B.M.C. No. 288) and again in 197–98 A.C. (B.M.C. Nos. 289, 291, 293). The coins and inscription of Rudrasimha show him to have been a Kṣatrapa in 180-81 A.C. (B.M.C. No. 295 and Gunda inscription L. 963). The closing years of Yaj̃ñaśri's reign appear therefore to have been full of struggle with the two Mahākṣatrapas who seem to have won back the overlordship by turns, Rudrasimha finally consolidating his position by the end of Yaj̃ñaśri's reign. The short gap from 188–90 A.C. in Rudrasimha's rule as Mahākṣatrapa may be due to some renewed attempt at reconquest on the part of Yaj̃ñaśri's successor (or may be due to the dynastic revolution that was taking place in the Paiṭhan kingdom).

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We are now left with the Vilivāyakuras and Māḍhariputras. These are

Gotamīputra Vilivāyakura
Vāśiṣṭhīputra Vilivāyakura

and

Māḍhariputra Śakasena
Māḍhariputra Sivalakura
Māḍhariputra Siri Vira Purisadatta of the Ikṣakus
Māḍhariputra Iśvarasena the Abhira.

As Baleocuros (Vilivāyakura) was mentioned as a king by Ptolemy in his Geography (Ptolemy, Ibid., p. 175), along with Caṣṭana and Pulumāvi, he would seem to be a ruler of certain repute. It is not unlikely that, like the Hārītīputra Śātakarṇis of later times, he was a local chieftain who had claimed and maintained independence as a sovereign, in a part of the dismembered Paiṭhan kingdom, presumably before the recovery under Gotamīputra and Pulumāvi. According to the evidence of the coins the Vāśiṣṭhīputra Vilivāyakura was the earlier of the two (B.M.C. Nos. 13,15,–21); some of his coins having been restruck by Māḍhariputra Sivalakura (B.M.C.) Nos. 25,26,29,30 and one by Gotamīputra Vilivāyakura (B.M.C.) The fact that latter restruck also coins of Māḍhariputra Sivalakura (B.M.C. No 52) shows that he (Gotamīputra) was the last of the three kings.[1]

Of the four Māḍhariputras, the Śakasena may, as a working hypothesis, be held to be the son of the Satrap Śatakarṇi and of the daughter of Rudradāman. For the name of the king and of his mother point to connection with the Śakas (R. B., p. 21, footnote 2) while the use of the metronymic is definitely due to Śātakarṇi influence and connection.[2] The locality where the inscription occurs also agrees with this view. As the sister's son of Dāmajādaśri and Rudrasimha the succession to the satrapy under the Śakas would not violate the Śātakarṇi ideas of succession; the succession to the paternal satrapy at the same time, would agree with the Śaka practice. The other three Māḍhariputras may have been sisters' sons of this king and divided the remnants of the Paiṭhan kingdom among themselves, using the metronymic to indicate that they all had (some kind of) legitimate claim to the royal title formerly held by Śātakarṇis. The characters of the Jaggayyapeta inscription (of Māḍhariputra Siri Vira Purisadatta)

[1] Sir R. G. Bhandarkar's suggestion that they were viceroys of Gotamīputra and Pulumāvi is not tenable.
See D. R. Bhandarkar *I.A.*, February 1920, Appendix B.

[2] Dr. D. R. Bhandarkar reads "Śāta" for "Sena" in this inscription, see *Indian Antiquary*, June 1918, p. 155-6. This would make the name a compound of "Śaka" and "Śāta," indicating both lines of royal connections.

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are held to be similar to those of the Śātakarṇi records, but to be of later date.[1] This agrees with the hypothetical reconstruction offered above.

This would bring the Gotamīputra Vilivāyakura to the time when both the northern as well as the southern kingdom of the Śātakarṇis had broken up. There would be nothing improbable in a chieftain of the family (if Kura=Kula) that had once asserted independent sovereignty, again driving out the Māḍhariputra Sivalakura, who may have succeeded to this part of his uncle's dominion. The Hāritīputra Śātakarṇis were probably another branch of the royal family, who succeeded in asserting their sovereignty and holding it for sometime in the extreme south west of the realm, nearest to the district known as that of the Śātakarṇis.

It need hardly be added that the above suggestions regarding the Chatarpana, the Vilivāyakuras and Māḍhariputras are more or less hypothetical and have been put forward only for the sake of completeness. They do not affect any of the major conclusion drawn in the body of the essay proper.

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[1] *A. S. S. I., Buddhist stupas of Amarāvati and Jaggayyapeta*, 1887, pp. 107–11 and *E. I.*, Vol. X, Lüders list.

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Numismatic Supplement No. XL

[for 1926-27]

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NUMISMATIC SUPPLEMENT No. XL.

ARTICLES 265–276.

Continued from "Journal and Proceedings," Vol. XXI, New Series, No. 6.

265. COINS EXHIBITED AT THE ANNUAL MEETING OF THE NUMISMATIC SOCIETY OF INDIA HELD AT ĀGRA, ON JANUARY 2, 1927.

(1) *Ar* ¼ Rupee of Sher Shāh.

Wt.	S.	Date	Mint.	Provenance.
43.	·62	948	Āgra.	Jhālrāpatan.

Obverse.

In a circle.
The Kalima.

Reverse.

In a circle.

ابو المظفر
شـــــير شاه
سلطان
ضرب اكره ٩٤٨

There are a few known half rupees of Sher Shāh. A quarter rupee was so far unknown; so this coin is unique and will be of great help in studying the metrology of the time.

(2) *Ar* ½ Rupee of Jhālāwār State.

Wt.	S.	Date	Mint.	Provenance.
83	·93	R.Y. 30	Jhālāwār.	Jhālrāpatan.

Obverse.

ملكه معظم
وكٹوريه بادشاه
انگلســـتان

Reverse.

مانوس
ميمنت
٣٠
سنه جلوس
ضرب
جهالاوار

Jhālrāpatan Mint marks, four-leaved branch on 'Sanah' and Phulli on 'Julūs' as usual.

It may be noted that:—

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(1) The coin reads "Jhālāwār" Mint whereas Prinseps and Webb mention 'Jhālrāpatan' as the Mint town. Webb does give Jhālāwār as his reading on Coins but none of the coins illustrated in his "Currencies of Rajputana" shows the mint name clearly.

(2) The Nazri Rupee not mentioned by Webb, but in my Cabinet, has not the clear lettering of this Coin.

(3) Ordinary Coins of Jhālāwār are smaller and thicker.

(3) Æ ½ Rupee of Jaipūr State.

Wt.	S.	Date.	Mint.	Provenance.
82	·95	R.Y. 29	Sawāi. (Mādhopūr).	Jhālrāpatan.

Obverse.

شاہ عالم بہا

بادشاہ غاز

سکّہ مبار

Reverse.

مانوس

میمنت

۲۹

سنہ جلوس

ضرب

سوای

Col. H. R. Nevill assigns the coin to Sawāi Mādhopūr mint. The Nazri Rupee exhibited by him has the "triple bow, with the central loop pointed" as symbol, similar to that on this coin.

(4) Æ with traces of Silver coating to pass it for a rupee of the Jodhpūr State.

Wt.	S.	Date.	Mint.	Provenance.
150	·8	R.Y. 5	Sawāi. Jodhpūr.	Jhālrāpatan.

Obverse.

شاہ عا

نے

حب قران ثا

سکّہ مبارک

Reverse.

مانوس

میمنت

۵

سنہ جلوس

ضرب

سوای جود پور

The honorific epithet for Jodhpūr is Dār-ul-Manṣūr. Of the Rajputana States, Jaipūr and Bundi (?) are known to have used "Sawāi" as prefixed to their mint names. So far this coin is a solitary instance of Jodhpūr or any other place having been styled "Sawāi." The Nāgari letters श्री जी on the obverse are also noteworthy.

Ratilāl M. Antāni.

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266. Rare Mughal Coins acquired for the Provincial Museum, Lucknow.

In the year 1924-25 a find of 101 silver coins discovered at Pasai, Police station Mehdawal, Dist. Basti, brought to light two rare coins described below :—

1. Farrukhsiyar, mint Bijāpūr, and,
2. Muḥammad Shāh, mint Mu'azzamābād, 113X-9.

Both specimens are in perfect preservation and have a clear inscription (*see* Plate 1, Nos. 1 *and* 2).

The first United Provinces Treasure Trove report for the year 1925-26 deals with a find of 71 silver coins found at Bidaoli, Tahsil Chhata, District Muttra. With the exception of a single coin of Muḥammad Shāh, mint Shāhjahānābād, the entire lot represents the coinage of Shāh 'Ālam II, from the mints of Akbarābād, Bareli, Brijendrapūr, Farrukhābād-Aḥmadnagar, Gwāliar, Hāthras, Itāwa, Jaipūr Sawāi, Mahindrapūr, Benāres—Muḥammadābād and Shāhjahānābād. A single coin bears the mint name 'Alinagar'[1] علینگر dated 21 r.y., 119X Hijri (Pl. 1, No. 3). There is absolutely no doubt about the reading of the mint name. I have shown the specimen to the best numismatists of the U.P. The question is of the identification of the mint. There is a place of the name in Benāres district, but I don't find any other reasons to show that the place flourished as a mint town within such a short distance of Muḥammadābād—Benāres.

Prayāg Dayāl.

267. Coins of Husain Baiqara of Khurāsān (873–913 H).

In the year 1924-25, a find of ten silver coins found at Mauza Ghūripūr, Tahsil Biswān, district Sitāpūr, revealed two coins of a descendant of Timur, Ḥusain Baiqara of Khurāsān.

These are flat thin pieces resembling the issues of Bābur and Humāyūn along with which they were discovered.

No. 1 is of mint Herāt and is described on page 47 (No. 123), Vol. VII, of the British Museum Catalogue of Oriental coins.

No. 2 is of mint Astarābād and is mentioned on page 158, Vol. X, of the British Museum Catalogue of Oriental coins. This bears date 896 H (Pl. 1, Nos. 4 *and* 5).

Mr. Nevill remarks that this resembles in composition the great Rāwalpindi find of 1920, while Sir Richard Burn says

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[1] (? 'Alinagar, in the Bisauli Tahsil of the Badāyūn District, formerly held by '*Ali Muḥammad* Rohilla.)

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that this is the first time that coins of the series have been noticed in a treasure trove in the U.P.

PRAYĀG DAYĀL.

268. NARWAR COINS.

In the year 1925-26, a hoard of 926 copper coins was found at Lalitpūr in Jhānsi district. The coins were badly covered with verdigris and had to be cleaned very carefully. On close examination they appeared to be issues of Asalladēva of Narwar. Of the whole number, 25 bore clear dates and 12 incomplete dates in the Saṁvat era. The dates furnished by the find are Saṁvats 1320, 1328, 1329, 1340, 1344, 1345, 1346, 1348, and 1349 (Pl. 1, No 6-14).

According to a table on page 90 of Cunningham's 'Coins of Mediæval India', Asalladēva ascended the throne in Saṁvat 1312, Gopāla in Saṁvat 1335, and Gaṇapati in Saṁvat 1347. This assumption was based on the fact that only two dates of Asalladēva, viz., 1327 and 1330, were then known from inscriptions and coins. The present find has fortunately brought to light several new dates which extend the reign of Asalladēva to Saṁvat 1349. Consequently the dates of accession, viz., Saṁvat 1335 and 1347 assigned hitherto to Gopāla and Gaṇapati, respectively, can no longer stand.

PRAYĀG DAYĀL.

269. ODD NOTES.

Mr. Douglas, N.S., XXXVII, 237, on some Mālava Coins.

One of the derivations of the word Mālava is from Mālaya. Malai is a Dravidian word for mountain. There is no objection to a Dravidian derivation of the word, as up to the 9th century A.D., Kanarese was spoken as far as the Godāvari (Nṛipatuṅga's Kavirājamārgga, ed. Pāthak I. 36) and we still have traces of Dravidian in Brāhui, a Baluchistan tribe. And the Malloi date from B.C. 323 while the Mallas were an important tribe with two capitals in Buddhistic times (Cambridge Ancient History, Vol. I, 175). The presumption that Mālaya (or rather Malaya) is the old form of the tribal name is therefore quite tenable. The Dravidian connection may help to solve the inscriptions. For instance 'Mala' is another (the Kanarese) form of 'malai.' Vincent Smith, Vol. I, p. 163, writes "Very odd the names of chiefs are, and evidently of foreign origin." These names may be of Dravidian origin or Sanskritised forms of Dravidian names.

A. MASTER.

270. SULṬĀNS OF GUJARĀT.

I. Laqabs.

Dr. Taylor has given the titles of most of the Sulṭāns on p. 49 of his Coins of the Gujarāt Sulṭāns. They are confirmed

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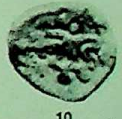

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from inscriptions in Aḥmadābād. In describing the titles I shall omit the words 'ud-dunyā v'uddīn' so that Shams will stand for shams-ud-dunya v'uddīn.

Tātār Khān became king as Muḥammad I with the title (according to the Mir'āt i-Sikandarī) of Nāṣir. Firishta on the other hand states that he was called Ghiyāṣ. Ẓafar Khān, the father of Tātār, was appointed governor of Gujarāt by Muḥammad Tughlaq.[1] This Muḥammad (IV in I.M.C.) apparently took no laqab. At least there is none on his coins, and Tātār could hardly have derived his title from a laqab of his. But Vajīh-ul-mulk, Ẓafar's father, became a Musalman in the reign of the famous Muḥammad Tughlaq, who died in A.H. 752 and presumably Ẓafar had him in mind, when he named his son. Muḥammad Tughlaq III also used no laqab on his coins (I.M.C., p. 50 foll.) and the last user of the laqab appears to have been Ghiyāṣ ud-dīn Tughlaq. The balance of probability therefore leans to Firishta's version (though he is usually not very trustworthy), especially as the succeeding Muḥammad has the laqab Ghiyāṣ.

When he came to the throne Ẓafar Khān could not take his son's laqab and there were none to imitate in the Tughlaq dynasty. He was founding a dynasty and the founder of the first dynasty of Dehli Sulṭāns was Shams-ud-dīn Altamsh, if Muḥammad bin Sām, who had no son and Aibak, whose son reigned less than a year be excluded. Altamsh reigned in A.H. 607–633 and his laqab Shams[2] was the most obvious perhaps to assume. All the succeeding Muẓaffars assume the same laqab. Aḥmad I assumed the laqab of Nāṣir. This is attested by his coins and an inscription.[3] Aḥmad is not a name found among the Dehli Sulṭāns. Its equivalents Maḥmūd, the son of Altamsh, the Turkish slave and Muḥammad Khilji, better known as 'Alā'uddīn, supply the laqabs of nāṣir and 'alā. Aḥmad like his grandfather appears to have preferred to follow the Turkish slave dynasty. Quṭb-ud-dīn Aḥmad chose a laqab which became a personal name like that of 'Alāuddīn. He is known in the histories as Qūṭbuddīn in preference to any other name, although in inscriptions[4] and coins his full name and title are given as quṭb-abu'ul Muẓaffar Aḥmad Shāh. His laqab Quṭb has an obvious connection with Quṭb-ul-aqṭāb, the holy Bukhārā Saiyid, the patron of Vajīh-ul-mulk.[5] The history of Quṭb-ud-dīn shows that until his quarrel[6] with Shāh 'Ālam, which ended in his death, the

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[1] Bayley's Gujarat, p. 74.
[2] Bayley, p. 84 note. Hodivālā, Unpublished Coins of the Gujarat Sultans, p. 21.
[3] *Archæol. Surv. Ind.*, Vol. XVIII, p. 310.
[4] *A.S.I.*, p. 292.
[5] Bayley, p. 70.
[6] *Ibid.*, p. 155.

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Sulṭān was much under the influence of the Bukhārā Saiyids. He was the first to adopt the title of amīrulmuminīn and abu'lmuẓaffar, both of which Altamsh used. The former of these is emphatically a religious title. The great Maḥmūd I used the title Shamsulmuluk va'l-ḥaq nāṣir ab'ul fatḥ in A.H. 897,[1] but his usual laqab was nāṣir. In this and in the use of abu'lfatḥ he appears to have followed Aḥmad I. But as his name was Fatḥ Khān and his regnal name Maḥmūd he had a much better reason for adopting those titles than Aḥmad. Maḥmud III follows him in all his titles. Bahādur on the other hand strikes out a new line, and adopts the laqab of quṭb. Aḥmad III announces the laqab of ghiyāṣ like his predecessors the Muḥammads. It may be, of course, that all these laqabs were arbitrarily assumed, but it does seem possible to trace a method, which considering the importance attached to laqabs, is a priori probable.

II. Inscriptions on coins.

(*a*) Dr. Taylor (C.G.S. Nos. 8 *a* and *b*) has given the legend on the large copper coin of Muḥammad II correctly, but the translation, which has been repeated by Codrington—Musulman Numismatics and Brown-Coins of India, should be "May the coin of Muḥammad Shāh the Sulṭān, the Aid of the Faith remain so long as in the Mint of Heaven the discs of the Sun and Moon remain." "Gardūn" which Dr. Taylor translates by "sphere" is commonly used for the celestial sphere. The reference is to gold and silver coinage (mihr va māh) and is prompted by the common phrase of copper-plate grants—"to endure so long as sun and moon endure." By the irony of fate, no gold or silver coins of Muḥammad II are now to be found.

(*b*) Coin 68 of Taylor's C.G.S. (p. 59) has always been a puzzle. The word there read "Ahd" was later read "umr" by Dr. Taylor and this word which means "age" and not "year" does not give a satisfactory meaning. In the Gujarāt inscriptions we find two words which may be clues (1) a'ṣr, in an inscription[2] of Muẓaffar II in the phrase fī 'aṣar, in the times of, and (2) a'mm in an inscription of Aḥmad III himself[3] in the phrase ibn-i-a'mm-i-Maḥmūd Shāh, the son of the paternal uncle of Maḥmūd III. This curious expression is paralleled by that used by Maḥmūd I, akh-i-Quṭb-Shāh or brother of Quṭb Shāh to show the connection with the previous king. The statement in the chapter title of the Mir'at-i-Sikandari[4] that he was the son of Laṭif Khān, grandson of Lashkar (or Shukar) Khān seems to be an error. It is

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[1] *A.S.I.*, p. 289.
[2] *A.S.I.*, p. 290.
[3] *A.S.I.*, p. 298.
[4] Brown Letter Ed., p. 313.

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something, however, to know that he was the son of a brother of Laṭīf Khān, who never succeeded to the throne.

DHĀRWĀR, A. MASTER.
April, 1927.

271. THE ARTHAŚĀSTRA ON COINS AND MINTING.

The Arthaśāstra of Kauṭilya, or Kauṭalya as he should more properly be called, was written at some time between the 4th century B.C. and the third century A.D. It is a book dealing with the science of administration and includes therefore the monetary side of State finance. It has been carefully translated by Dr. Shāmaśāstry and the second edition of his translation is made use of in this article (Tr.). But it has been necessary to refer frequently to the text in order to see whether a particular rendering is inferred or a literal translation. A literal rendering often gives better sense and is more consistent than the meaning as it appears to the translator, suggested very often by a commentator, who interprets an expression by the practice of his times.

II. Terms.

It is important to get the terms as clear as possible because our author uses sometimes one term with several different meanings. Suvarṇa (the ordinary Skt. word for gold) has at least two meanings. It has its etymological meaning of 'with a good colour' and is used both of gold and silver. It may be translated, perhaps, as pure bullion. Suvarṇa manufactured from gold or silver is referred to[1] and elsewhere impure silver alloyed with suvarṇa is said to give a good white colour.[2] The word also means a weight of gold, and is also called a karśa. The translator also considers that suvarṇa means a gold coin, but there is no evidence that I can find for this assumption. Suvarṇa is also used specifically as pure gold, as distinct from pure silver and as gold generally. 'When the streak of pure (gold) is of the colour of turmeric, it is termed suvarṇa.'[3] In the sense of gold generally, it is used in the phrase rupyasuvarṇa, gold and silver.[4]

Other terms are also used for gold according to the method of preparation and its intended use, but need not be mentioned here.

Silver is rūpya, and the term tāra is also used in a special sense. Rūpa is used in the sense of a shaped piece of metal which may be a coin or an ingot. The term lakṣaṇa is used specifically for 'coin.' It means of course, etymologically,

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[1] Tr. Bk. II, ch. XIV, para. 5.
[2] *Ibid.*, ch. XIII, p. 102.
[3] Tr. Bk. II, ch. XIII, p. 99.
[4] *Ibid.*, ch. XIV, first para.

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nothing but a distinctive mark and might only indicate a marked ingot. But the context, as will shortly appear, indicates its use in the sense of coin.

III. Organisation.

There were three important officials, the State goldsmith, who received gold and silver for manufacture into ornaments from the public;[1] (the translator indicates that he also minted coins for the public, but the text does not bear this out), the superintendent of coins (lakṣaṇa) and the examiner of rūpa coins.[2]

The superintendent manufactured silver and copper coins (rūpyarūpa and tāmrarūpa). Tāmra is translated as copper, but there is another word for copper, śulba and tāmra may possibly denote bronze. No gold coins are mentioned. The silver coins are one paṇa, a half paṇa, a quarter and an eighth. They were alloyed with four parts of copper (tāmra), and one māśa (1/16) of a base metal. This apparently means (if we follow the analogy of the explanation of the Commentator in the parallel case of copper coins) 4/16 of tāmra, 1/16 of base metal and the remainder of silver. The copper (tāmra) coins are one māśaka or māśa, half a māśa, one kākaṇī or a quarter of a māśa, and half a kākaṇī. The copper coin was alloyed with four parts of a metal (according to the Commentator, silver), one part base metal and the remainder tāmra.[3]

The examiner of coins or rūpadarśaka regulated the use of coins (paṇayātrām) for commerce and for being received into the treasury. A discount of 8% called rupika was levied on all coins paid in the course of business transactions, and in addition a sum of 5% as vyāji and 1/8 paṇa % as parikṣika or testing charge. The Commentator limits these payments to cases in which money was paid to the government and this is probably correct, although the text does not specifically state this. The rupika was probably a discount consisting partly of a seigniorage for coins issued at their metallic value and partly of compensation for depreciation. There is, of course, always a tendency for worn coins to find their way to the treasury. The vyāji was apparently the king's privilege. There was a difference of five per cent. between the royal and the commercial measures[3] and vyāji—we have the Commentator's authority for this—represented the difference between the two.[4] Vyāji is defined in the account of the treasury for things received in kind, as 'the amount or quantity of compensation which is claimed for making use of a different balance or for any error in taking handfuls.'[5]

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[1] *Ibid.*, ch. XIV.
[2] *Ibid.*, ch. XII, p. 95.
[3] Bk. II, ch. XIX, p. 125.
[4] ,, XII, p. 97, n. 1.
[5] Bk. XV, p. 110.

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It has been stated above that suvarṇa means *inter alia* a weight. The suvarṇa or karśa consisted of 16 suvarṇa māśa and each māśa of five gunja seeds (i.e. the rati) or ten māśa seeds.[1] It is possible that the māśa took its name from a full māśa pod. It is possible that gold made up into weights of a suvarṇa was stamped and used as currency, but this is nowhere stated. The Commentator, however, calls suvarṇa in a certain sense 'the coin known as the rūpyakarśa[2] and the paṇa may have been of the karśa weight or there may have been another paṇa of silver of that weight. It will have been noticed that there was no copper paṇa as we find in later writers, e.g. Śukrācārya. If the value of the rati has not changed appreciably in the course of years, the 80 rati (16 māśa) unit of our author may be compared with the 80 rati (10 māśa) unit of the dirham of the Dehli Sulṭāns and its predecessors.[3] The suvarṇa is divided into weights diminishing by a half until half a māśa is reached and in the other direction is multiplied by two until eight suvarṇas are reached. Then there are weights of 10, 20, 30, 40 and 100 suvarṇas.[4] This scale is of some interest to numismatics as it shows that in the higher denominations the decimal system took the place of doubling or halving and coins and weights move on closely parallel lines.

The silver unit was the Dharaṇa, divided into 16 silver māśas or 20 saibya seeds. The silver māśa weighed 88 seeds of white mustard. It must have been several times as heavy as the gold māśa and was used also as an avoirdupois weight.[5] Its subdivisions and multiples were the same as those of the suvarṇa. Afterwards the dharaṇa appears to have become a coin.

What the paṇa was worth in terms of modern coinage cannot easily be ascertained. But we find that menial servants and workmen get 60 paṇas per annum, while village servants or officials, as they may be called, get 500. The difference is rather greater than to-day, when a labourer, who is unskilled may earn (in the more remote parts of the Bombay Presidency) 100 rupees a year and the village officer (e.g. a village accountant) 300 or 400. But the paṇa may be taken to have had a pure silver content of a little more than half the rupee of to-day and have been roughly equivalent to it in value. If we wish to equate prices, it must be remembered that the silver content of the modern rupee is worth only about a shilling and that the value of the rupee is one shilling and six pence

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[1] Bk., XIX, p. 123.

[2] *Ibid.*, XIII, p. 102, n. 3. Rūpyakarśa means silver karśa and may be equivalent to kārśāpaṇa, a coin referred to in other Śāstras.

[3] The change of the value of the māśa from 5 to 8 ratis appears to be due to the introduction of a decimal division of the suvarṇa or dharaṇa followed by a return to the division into sixteen.

[4] Ch. XIX, p. 124.

[5] *Ibid.*, pp. 124, 125.

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Prices of the time of Kauṭalya might then be expected to be one-third of those ruling to-day. This estimate is, I fear, of no value whatever, as it is based upon one fact only. The materials, however, are in the Arthaśāstra, to be worked out.

Dhārwār, 1927. A. MASTER.

272. COPPER DĀMS OF JALÁLU-D-DÍN AKBAR

I.

II. (Same as I.)

Coins 1 and 2 are dāms of Mint Dáru-l-Khilāfat Āgra, dated 982, of the dotted line Aḥmadābād type described and published by Mr. Whitehead under No. 71, Num. Chronicle, 5th series, Vol. III, 1923. Mr. Whitehead further says: "the curious thing about them is the fact that the date is expressed no less than three times, once in words and twice in figures."

I and II. Obverse.

دار الخلافه اگره
.....
ضرب ۸۲ فلوس ۹

Reverse.

دو
هشتاد و
.....
في نهصد و
۹۸۲
سنه

A. *Obv.* A. *Obv.* A. *Rev.*

III.

Last ر=R of the mint is like ∞ and the monog. 3 is *above* it

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B Obv. *B Obv.* *B Rev.*

IV.

Last ر=R of the mint town is like ſ with the monog. ع *below* it, also on the Reverse.

NOTE.—The Mint Town of Nos. III and IV is not published and is not known to me. Mr. Whitehead's coin is not figured in the Num. Chronicle. Dāms Nos. 3 and 4 are also of the dotted ـــــ line Aḥmadābād type and bear date 997 H. They appear to be of an unpublished mint.

Obverse.	*Reverse.*
	هفت
مین پور	نود و
.....	في نهصد و
ضرب فلوس	.....
	۹۹۷
Date in words and figures.	سنه

The mint appears to be MÍRPÚR but the 3rd or the middle letter has a Nuqtá over it like "ن." If this is "*N*" the mint would be MÉNPŪR, MAINPŪR. It also looks like عینپور= 'AÍNPŪR.

BOMBAY, C. E. KOTWĀLL.
24*th December*, 1926.

Editor's Note:

These coins are not new but they are undoubtedly rare and interesting. Nos. 1 and 2 are freaks. Nos. 3 and 4 bear a mint name which has not yet been satisfactorily read. It has been deciphered as Khairpūr, but this reading is open to challenge on historical grounds (P.M.C. 655 and I.M.C. 462). The question has been discussed in N.S., XXXIV, pp. 222-3 by the present writer. The mint may be Ujainpūr, or more probably still Chainpūr, as the supposed initial *alif* of Ujainpūr cannot be descried on any of the known specimens. S.H.H.

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273. A Gold Coin of Bāppā Rāwal.

The gold coin of Bāppā Rāwal, described in this article, is the first of its kind to be discovered. No other gold coin of any ruler of the various dynasties that held sway over Rajputana from the sixth to the eleventh century of Christ has been found.

Some five years ago, I got this coin from a Shroff in Ajmere. On making enquiries, I learnt from him that a merchant of Bhilwāra (Mewār) had sold him this coin with some old gold and silver ornaments. When it came into the possession of the Shroff, it had a small gold ringlet attached to it, which he separated. The coin at present forms part of the collection of His Highness the Darbār of Sirohi State for whom it was purchased.

As it now stands, it weighs 115 grains and bears the following marks :—

On the Obverse :

(1) Beginning from the top and running to the left over more than half of the coin is a circle of dots, which is called माला (mālā) in Rajputana.

(2) In the upper part below the circle of dots are written the words "श्री वोप्प" (Shri Voppa) in the writing of the 8th century A.D. These words denote the name of the king in whose honour or by whose orders, this coin was struck.

(3) Below this inscription, to the left near the ring of dots is a standing trident.

(4) To the right of the trident, there is a Shiva Lingam on a platform of two steps.

(5) To the right of the Shiva Lingam, is the sacred bull of Shiva, in a sitting posture. The bull has his mouth near the Shiva Lingam, his tail and some part of his body have disappeared owing to the wearing away of the coin at that place.

(6) Below the Shiva Lingam and the sacred bull is seen a man lying on his stomach. Both his ears are pierced. They look bigger than an ordinary man's ears, as the holes made in piercing are comparatively larger. His face too appears to be longer than usual.

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On the Reverse :

(1) Barring some part of the coin to the right, the circle of dots is to be found near the edge running for more than three-fourths of the circumference of the coin.

(2) In the upper part below the circle of dots, in a line are found three signs. Beginning from the left the first appears to be a folded चंवर (chowri).

(3) The second is ⊕.

(4) The upper portion of the third sign is difficult to decipher, as it has been rubbed off by the wearing away of the coin. Its lower portion however is in the form of a curved line, which may well be the handle of an umbrella. The upper part, which is not clearly distinguishable also looks like an umbrella.

(5) Below these three signs, with its face to the right is a cow, which is standing. Some part of its mouth is not clearly discernible owing to the wearing away of the coin.

(6) Near the hind legs of the cow, with its face to the left is the young calf sucking the milk of its mother. A bell is seen suspended from its neck and its tail is high.

(7) A little above the tail of the calf is a pot, the right side of which has worn off.

(8) Below the cow and the calf there are two parallel lines with a little space between them.

(9) To the right of these lines is a fish in a slanting position, the lower part of its body is seen just touching the line.

(10) Below these two lines and above the ring of dots, appears something like a flower, made up of four dots.

On the Obverse :

(1) The circle of dots does not call for any remarks as it is very common on old coins.

(2) The inscription on the coin bears the name of the king as "श्री वोप्प" (Shri Voppa). This is one of the many old variations of the name of "वप्प" (Vappa). In the old Sanskrit books and inscriptions, the king has been variously called वप्प, वोप्प, वप्पक, बप्प, बप्पक, बप्पाक, बाप्प, बाप्प and बापा. Both बप्प and वप्प are old Prakrit words meaning 'father.'

(3) The trident is one of the chief weapons of Shiva and in a coin of a ruler like Bappa, who was a

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devout worshipper of Shiva, the occurrence of the trident and Shiva Lingam is but natural.

(4) The Shiva Lingam may well be taken to denote Eklingji,[1] the family god of Bappa.

(5) The sacred bull is the vehicle of Shiva and as such its presence near the Shiva Lingam is quite proper.

(6) A man is seen in a reclining position below the Shiva Lingam ; nothing definite can be said about him. But it is quite possible that he may be Bappa himself, who is seen here prostrating himself before the family god. Three explanations are possible in regard to the pierced condition of his ears and his long face : (*a*) It is possible that the man who cast the dies did not execute the figure properly. (*b*) Kings in old times used to put on large kundals in their ears: the pierced ears with these heavy ornaments naturally looked larger and were represented as such. (*c*) Bappa was considered to be the incarnation of Nandi, one of the gaṇas of Shiva, hence his face might have been executed in the coin long like a monkey's. Or if the man is not Bappa, he may be the Guru of Bappa, Hāreet-Rāshi, who was also considered to be an incarnation of चंड (Chaṇḍa), another gaṇa of Shiva.

On the Reverse.

(1) The circle of dots. An explanation has already been given elsewhere.

(2) and (4) The चंवर (chowri) and the umbrella are the emblems of Royalty.

(3) ⊕ This sign denotes the Sun, and is found in various similar shapes in the grants engraved on stones discovered in Rajputana. The sign shows that Bappa belonged to the Solar race, as stated in the Eklingji Inscription of Samvat 1028 (Vikrama Era), A.D. 971.

(5 and 6) The cow is the famous Kāma Dhenu of Hāreet-Rāshi, the Guru of Bappa. Tradition has it that Bappa tended this cow for many a day.

(7) The pot already described may be there to hold the milk.

(8) The two parallel lines indicate the banks of a river, which is suggested by the presence of the fish,

[1] The temple of Eklingji is situated 13 miles to the north of Udaipūr. Not only is Eklingji the family god of the Sesodiās, but he has been considered as the ruler of Mewār, the Mahārānā in power acting only as his viceroy. Hence the Mahārānā is called his 'Diwānji' in Rajputana. See the author's History of Rajputana, Vol. I, page 336.

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which cannot live without water. If this surmise is correct, then the lines indicate the small river Kutilā, which flows past the temple of Eklingji.

(9) *The flower.*—The existence of flowers near a river is but natural. It may be a 'lotus.'

The word Bappa, as written elsewhere, means father. It is only a title. It remains to be seen which of the Mewār rulers was known by this title. I feel no hesitation in identifying Bappa with Kāla Bhoja. In the chronicle of the Badwas,[1] the great poem called Rāj Prashasti[2] engraved on 25 slabs on the banks of the Rāj Samudra Lake about 40 miles from Udaipūr, and the chronicle of Nainsi,[3] the name of the son of Bappa is given as Khumaṇ and in the Ātpūr inscription, Khumaṇ is called the son of Kāla Bhoja, hence the title Bappa applies to Kāla Bhoja. Professor Devdatta Rāmkrishna Bhāndārkar identifies Bappa with Khumaṇ and Colonel James Tod with Shilāditya. Both these identifications are untenable. (See the History of Rajputana by the author, Vol. I, pages 408, 409.)

It may be urged that if Kāla Bhoja is Bappa, his name Kāla Bhoja should appear on the coin and not his title Bappa. But we have instances of a king bearing several titles in addition to his name and of his coins bearing either his original name or one of his titles by which he was well known. For instance, on a coin of Bhojadeva, the Pratihāra ruler of Kanauj, we find inscribed the title "Ādivarāh" and not the name "Bhojadeva." (See Smith's Catalogue of the Coins in the Indian Museum, I, page 241.)

Kāla Bhoja or Bappa as he is generally called, was eighth in descent from Guhil, the first amongst the rulers of Mewār about whom something definite is known. From the data available, it is surmised that Bappa ruled from 734 to 753 A.D. (or from 791 to 810 Vikrama Era). His capital was at Nāgda and near it lay the temple of his family god Eklingji. As a devout worshipper of Eklingji, Bappa held the chief priest—the saintly Hāreet Rāshi—in great esteem. This feeling of reverence for his religious Guru has probably given rise to the many stories of Bappa with which all readers of Tod are familiar. There are other stories in which Bappa is represented as cutting off the heads of two buffaloes with one stroke of his sword at the sacrificial altar of the goddess, as maintaining an army of 1,272,000 men, as requiring four goats daily for his food, as putting on a dhoti 35 cubits in length and a turban 16 cubits long and as wearing a sword weighing 32 maunds.[4] Other accounts would make one believe that he went to Khurāsān in his old age, conquered that province and ruled

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[1], [2] and [3] See Vīr Vinod, Part I, pages 234, 250, and 252.

[4] Chronicle of Muhṇot Nainsi, Part I, page 2.

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there for the rest of his life. Most of these stories, if not all of them, are pure myths and have no foundation in history. Bappa died at Nāgda and his sepulchral monument is still to be seen at a distance of about a mile from Eklingji, where his standing image, about three feet in height is represented as pouring water on the Lingam of Shiva.

In reality we know very little about Bappa. All that is definitely known is that he captured the fort of Chitor from the Mauryas. The fact of his issuing a gold coin and the royal marks of the chowri and the umbrella clearly show that he was an independent and powerful ruler.

Colonel Tod following Abul Faẓl is of the opinion that the Mewār rulers are descended from Naushirwān, the ruler of Irān. Professor Devdatta Rāmkrishna Bhāndārkar thinks that they are Nāgar Brahmins. As against these theories, the mark of the sun on the coin supports our view that Bappa belonged to the Solar race and this view is further confirmed by the above-mentioned Eklingji Inscription of 971 A.D. as also by many other inscriptions of the mediæval period.

Ajmere. GAURISHANKAR H. OJHĀ.

274. A FIND OF INDO-GREEK HEMIDRACHMS IN BAJAUR.

Towards the close of 1926 a large find of Indo-Greek Hemidrachms was made near Gang, a small village in Bajaur, an area in the Dir, Swāt and Chitrāl Agency of the North-West Frontier Province.

Most of the coins were brought into Peshāwar and divided among a syndicate of silversmiths, so it is difficult to ascertain the numbers actually found.

The writer has seen over 1,000 but has only had the opportunity of examining 1 didrachm and 969 hemidrachms in detail. He has heard of other lots and believes that a minimum of 1,200 coins found their way to Peshāwar. The hoard consequently appears to have been about the size of the famous find brought to light in 1871 at Sonipat.

Unlike this latter hoard, the coins found in Bajaur show very little signs of circulation, and, as only four princes are represented, it must be assumed that they were almost contemporary Rulers.

Of the 969 Hemidrachms examined, 95 were Square Hemidrachms of Apollodotos, 152 of the usual type of Antimachos Nikephoros and 721 of Menander. There was also a solitary hemidrachm of Zoilos of the type with standing Herakles on the reverse.

This latter coin was naturally totally unexpected and its appearance in the hoard indicates that we must revise our ideas as to the period at which this king reigned.

The common Athene Promachos coins of Zoilos are

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contemporary with the latest debased coins of Strato I and perhaps 60 years later than the last issues of Menander. This present hoard seems to indicate that there was another Zoilos contemporary with Menander, about as early as 160 B.C.

My reasons for giving this comparatively early date to the find are as follows:—

(1) All the Menander coins show a comparatively youthful portrait of the king, and this is not altogether due to sentimental idealism as I have seen several of his coins showing a far older portrait.

(2) The large number of coins of Apollodotos seem to indicate that he was still ruling in the neighbourhood of the Kābul Valley and had not yet lost his northern provinces to Eukratides. The latter prince was deprived of part of his conquests by Mithridates, it is believed about 157 B.C.

(3) The Antimachos coins also appear to indicate the same date, assuming that the titles Theos and Nikephoros were applied to the same king. The earlier coins of this king were Tetradrachms, and these must have been struck in the Parapomisadae about 180 B.C. prior to the extension of the power of Eukratides. If he had a reign of more than 20 years his coins would occur in greater variety than they do.

I should imagine that this king was of the house of Demetrios and gave up his kingdom to his relative Menander in a family alliance to withstand the aggression of Eukratides. Certainly all four of the monograms on his hemidrachms are of frequent occurrence on the coinage of Menander.

In view of the renewed interest taken in monograms since the publication of Mr. Whitehead's important article in the Numismatic Chronicle of 1923 the writer attaches as an annexure a short note on the Monograms found in this hoard.

A list of the coins found is also attached.

Attention is drawn to the Zoilos coin referred to above (No. 53), to the owl hemidrachm of Menander (No. 48), to the two varieties of the helmeted Javelin-thruster (Nos. 46 and 47) and to a previously unchronicled variety of Menander (No. 45).

Æ Hemidrachm.

Obverse. Javelin-thruster. Greek legend running continuously round the coin.

Reverse. Pallas to left, Kharoshthi legend arranged in the usual way with "Menadrasa" at the bottom of the coin.

In right field

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The opportunity is also taken of describing a hitherto unchronicled didrachm of Artemidoros which the writer has recently obtained from Shinkiari in the Mansehra Tehsil of Hazāra District, N.W.F.P.

The coin was found by a villager together with two hemidrachms of Menander and two square hemidrachms of Polyxenos.

ARTEMIDOROS.

Æ Didrachm—148·5 grains

Obverse. Diademed bust to right. Greek legend *ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ ΑΡΤΕΜΙΔΩΡΟΥ.*

Reverse. Nike to right with wreath and palm. In right field .

Kh. legend Maharajasa apadihatasa Atimidarasa.

ANNEXURE A.

A NOTE ON THE MONOGRAMS ON THE COINS OF THE BAJAUR HOARD.

Of the five monograms attributed by Mr. Whitehead (Num. Chron., 1923) to the Kābul Kingdom only one or (K. 5) is represented. Twenty-two coins show this monogram alone and 23 others show it in combination with other monograms.

The Gandhara group is copiously represented: no less than 348 coins show (G. 1), 77 show (G. 2), 55 show (G. 3), 141 show (G. 4), 34 show (G. 5) and 54 show (G. 6). The Punjab group is very meagrely represented by two types of the Euthydemia monogram and which are shown on 14 and 12 coins respectively.

The enormous number of coins showing (G. 1) and the fact that they were nearly all in mint condition shows that this must represent the nearest mint city to the site of the find.

This is startling corroboration of General Cunningham's interpretation of *ΔΗΜΗΤ*, short for Demetrios which he identified as Chārsadda near the junction of the Swāt and Kābul rivers.

This has always been an important city and stands on the direct route to Bajaur up the Swāt and Panjkora rivers.

The only other monogram that is at all common is

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which occurs on 92 coins, and one may presume that it also is a Gandhāra Monogram, unless we assume, from the fact that it has only been chronicled on coins of Menander, that it is merely a mintmaster's monogram.

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ANNEXURE B.

Catalogue of coins in the Bajaur Find.

Size and index No.	King.	Obverse.		Reverse.		No. of coins.	Remarks.
		Type.	Monograms.	Type.	Monograms.		
Didrachm 1	Menander.	Javelin-thruster.	Nil.	Pallas l.	r.	1	Weight 149·1 grs.
					Total	1	
Hemidrachm Square 1	Apollodotos.	Elephant.		Bull		34	
2	,,	,,		,,	8 on hump.	32	
3	,,	,,		,,	c	11	
4	,,	,,		,,		11	
5	,,	,,		,,	ω	1	
6	,,	,,		,,	Nil	1	
7	,,	,,		,,		5	
					Total	95	7 Monograms.
8	Menander.	Diademed bust.	Nil.	Pallas l.	l. r.	6	
9	,,	,,	,,	,,	l. r.	1	
10	,,	,,	,,	,,	l.	12	
11	,,	,,	,,	,,	l.	92	
12	,,	,,	,,	,,	l.	6	
13	,,	,,	,,	,,	l.	1	
14	,,	,,	,,	,,	r.	6	
15	,,	,,	,,	,,	r.	47	
16	,,	,,	,,	,,	r.	1	
17	,,	,,	,,	,,	r.	20	
18	,,	,,	,,	,,	r.	102	

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Size and index No.	King.	Obverse.		Reverse.		No. of coins	Remarks.
		Type.	Mono-grams.	Type.	Mono-grams.		
Hemidrachm.							
19	Menander.	Diademed bust.	Nil.	Pallas l.	r.	5	
20	,,	,,	,,	,,	r.	1	
21	,,	,,	,,	,,	r.	1	
					Total	301	14 Mono-grams.
22	Menander.	Helmeted bust.	Nil.	Pallas l.	l. Σ r.	2	
23	,,	,,	,,	,,	l.	2	
24	,,	,,	,,	,,	l.	10	
25	,,	,,	,,	,,	r.	12	
26	,,	,,	,,	,,	r.	8	
27	,,	,,	,,	,,	r.	5	
28	,,	,,	,,	,,	r.	95	
29	,,	,,	,,	,,	r.	111	
30	,,	,,	,,	,,	r.	1	
					Total	246	9 Mono-grams.
31	Menander.	Javelin-thruster.	Nil.	Pallas left.	r.	35	
32	,,	,,	,,	With sloping aegis.	r.	21	
33	,,	,,	,,	,,	r.	23	
					Total	79	3 Mono-grams.
34	Menander.	Javelin-thruster.	Nil.	Pallas left with horizontal aegis.	r.	12	
35	,,	,,	,,	,,	r.	11	

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Size and index No.	King.	Obverse.		Reverse.		No. of coins	Remarks.
		Type.	Monograms.	Type.	Monograms.		
Hemidrachm. 36	Menander.	Javelin-thruster.	Nil.	Pallas left with horizontal aegis.	r.	1	
37	,,	,,	,,	,,	l.	1	
					Total	25	4 Monograms.
38	Menander.	Javelin-thruster.	Nil.	Pallas right.	l.	26	
39	,,	,,	,,	,,	l.	4	
40	,,	,,	,,	,,	l	10	
					Total	40	3 Monograms.
41	Menander.	Javelin-thruster.	Nil.	Pallas right.	r.	8	
42	,,	Legend continuous	,,	Legend continuous	l.	13	
43	,,	,,	,,	,,	l.	4	
44	,,	,,	,,	,,	l.	1	
					Total	26	4 Monograms.
45	Menander.	Javelin-thruster. Legend continuous	Nil.	Pallas left. Normal legend.	r.	1	Unchronicled.
					Total	1	
46	Menander.	Javelin-thruster.	Nil.	Pallas left.	r.	1	
47	,,	Helmeted.	,,	,,	r.	1	
					Total	2	2 Monograms.
48	Menander.	Bust of Pallas.	Nil.	Owl.	r.	1	
					Total	1	1 Monogram.

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Size and index No.	King.	Obverse.		Reverse.		No. of coins	Remarks.
		Type.	Monograms.	Type.	Monograms.		
Hemidrachm.							
49	Antimachos.	Victory.	l.	Horseman	Nil.	84	
50	,,	,,	l.	,,	,,	41	
51	,,	,,	l.	,,	,,	12	
52	,,	,,	l.	,,	,,	15	
					Total	152	4 Monograms.
53	ZOILOS.	Diademed bust.	Nil	Herakles crowned by Nike.	..	1	
					Total	1	1 Monogram.

SUMMARY.

	Kings.	Types.	Monograms.	Coins.
Hemidrachm ..	Apollodotos ..	1	7	95
,, ..	Menander ..	9	41	721
,, ..	Antimachos ..	1	4	152
,, ..	Zoilos ..	1	1	1
Didrachm ..	Menander ..	1	1	1
Total ..	4	13	54	970

M. F. C. Martin.

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275. A note on Mr. S. R. Ayyangar's article on 'Some Mughal Gold Coins.'

The find of sixteen specimens of "the diminutive gold coinage resembling that of Southern India" (B.M.C. Introd. lviii) which is the subject of the above contribution (Num. Supp. XXXIX, No. 259) is of considerable interest as the known examples of this class of Mughal mintages do not probably exceed twenty in number.

Mr. Ayyangar informs us that the total number of coins acquired under the Treasure Trove Act for the Madras Museum was sixteen, that they all weighed about 41·7 grs., that eight of them which bore the name of Muḥammad Shāh were all struck at Gūti, that of the other eight which were stamped in the reign of Farrukh-Siyar three were issues of Gūti, three of Tādpatri and two of an *atelier* the name of which it is impossible, in his opinion, to read in any other way than 'Gajjikota,' and of which the identification is involved in doubt and uncertainty "as there is no place by the name of Gajjikota" in any of the 'Taluqs' in the neighbourhood of Anantapūr the district in which they were found. Lastly, Mr. Ayyangar declares that "by the discovery of these coins, *two* new mints have *now* been brought to light, and it is *now known* that Farrukh-Siyar and Muḥammad Shāh minted these gold coins which are *entirely different from any known coins issued by them.*"

I am afraid that neither of these claims can be sustained in its entirety. There are no less than eleven Imtyāzgarh coins of the 'Vijayanagar pagoda' type in the British and Indian Museums. The same great collections contain Gūti Coins of Farrukh-Siyar and Muḥammad Shāh (B.M.C. No. 901 and I.M.C. Nos. 1854-5). A gold piece bearing very great resemblance to Mr. Ayyangar's Tādpatri coin in legend as well as date and differing only in weight (22 grs.) was described and figured in the British Museum Catalogue so long ago as 1892. It is true that the mint name could not be deciphered with certainty, as the initial letters had been cut off and our thanks are certainly due to Mr. Ayyangar for drawing the attention of numismatists to this find, as it contains the three less imperfect specimens which have enabled him to decipher the hitherto doubtful mint-name.

A coin of the type of Mr. Ayyangar's 'Gajjikota' piece of Farrukh-Siyar also is described and figured in the B.M.C. (No. 902). Moreover, the Indian Museum contains another issue of the identical mint bearing the name of 'Āli Gohar (Old I.M.C. No. 10908; Wright, I.M.C. No. 2281-a). The reading suggested by Mr. Lane Poole was 'Gangpūr,' and it was accepted, perhaps only for the want of a better, by Mr. Rodgers. Mr. Nelson Wright thought it should be read

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'Kanchankot.' The present writer ventured to propose in (Num. Sup. XXXI, Art. 196, iv) that the name was 'Ganjīkot' and adduced a series of passages which left, in his humble opinion, little or no room for doubting its identity with the Ganjikottah, Gunjcotta, Gunjicottah and Gandicottah of Firishta and other historians and locating the mint itself in the old fortress of Gandikot (Lat. 14° 47′ N., Long. 78° 16′ E. Imp. Gaz. *sub voce*). Mr. Ayyangar says that the name can be read only as 'Gajjikota' and declares that it is impossible, for that reason, to identify the place definitely. I am afraid the difficulty is an imaginary one and most probably due only to the effacement or invisibility of the 'Nuqtah' of the 'Nūn' in the specimen in the Thakkalapalli hoard. An examination of the illustrations in both the Catalogues is sufficient to show that the second letter does possess the dot and the fact that all the three numismatists of eminence who had handled the coins themselves, were agreed, (notwithstanding their differences in regard to the entire name), in reading the second letter as a 'Nūn' seems to me to clinch the matter and prove that the true reading is '*Ganjikot*' and not 'Gajjikota.'

As regards the second claim, it is hardly necessary to point out that the fact of gold coins on the pattern of the South Indian *Hun* having been struck in the names not only of Farrukh-Siyar and Muḥammad Shāh but of 'Ālamgir II and 'Āli Gohar (or Shāh 'Ālam II) has been familiar to numismatists for more than thirty years and has certainly not become known to them only *now*.

As the metrology of these pieces is not without interest, a few remarks in that connection may perhaps be permissible. The maximum weights registered in the Catalogues indicate the existence of four denominations or classes turning the scale at about 53, 25, 44, and 22 grs. The first two fall into line with and seem intended to take the place of or oust from circulation the pagoda and its half. The metrological model or exemplar of the pieces which weigh about 44 grs. was not, as Mr. Ayyangar thinks, the 'Vijayanagar pagoda' or any kind of South Indian *Hun*, but the Mughal quarter-muhr. As the weight of the pieces described by Mr. Ayyangar is said to be 41·7 grs., they must all be classed with this *third* class and distinguished metrologically from the pagoda-type. Indeed, it is worthy of note that of the four mints noted, the pagoda-weight types were uttered only from the atelier of Imtyāzgarh which showed no favour to the other. On the other hand, those of Gūti, Tādpatri and Ganjikot adopted with equal uniformity and persistence the 44 grs. or quarter-muhr standard to the utter exclusion of its rival. It is scarcely

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necessary to add that the 22 gr. pieces represent the moiety of this quarter-muhr type.[1]

S. H. Hodivālā.

Deolāli,
5th September, 1927.

276. The 'Shāh-i-Hind' Coins.

The attention of numismatists was first drawn to these curious monetary issues by the late Dr. G. P. Taylor. That untiring collector and enthusiastic student thus wrote about them in Num. Sup., XXXIII § 200 :—

"For now some fifteen years I have had in my possession eleven insignificant-looking coins, which are yet of interest because of the puzzling questions which they raise. *Where were they struck and by whom?* Seven of the eleven are of a larger denomination, and four of a smaller. * * * The average weight of the larger is 127 grs. and of the smaller 64 grs. The dates are as follows :

Large—937 H. (two), 938 (bronze), 939 (two) and 940 (two).
Small—934 H., 938, 938 (bronze), 939." (*Loc. cit.*, p. 77.)

It will be seen that Dr. Taylor had specimens of only two denominations and that the years 935 and 936 H. were not represented. But he says that he had seen in the collection of the late Mr. Frāmji Jāmāspji Thānāwāllā a larger and heavier coin which turned the scale at about 260 grs. and also a piece of the smaller denomination which exhibited the date 935 H. I must, during twenty-five years of coin-hunting in the Junāgadh bazars, have seen at least two hundred of these mintages and possess about sixty of them, including five which clearly show the missing date 936 H (Pl. 2, Nos. 1 *and* 2) and one of a *fourth* and still lower denomination weighing only about 30 grs.

The dates appearing on the coins (934 to 940 A.H.) and the high-sounding title of '*Shāh-i-Hind*' which is claimed for the ruler who issued them led Dr. Taylor to express the opinion that "this coinage must have been first uttered by Bābur after the defeat of Rānā Sangā in 933 A.H. at some mint in Mughal

---

[1] The attached list of known coins will make the point clear.

B.M.C.	900-a	Imtyāzgarh	Farrukh-Siyar	R 3	53 grs.
,,	976	,,	Muḥammad Shāh	1161	52 grs.
,,	977	,,	,,	..	51 grs.
I.M.C.	1839-41	,,	,,	R 3, 12	—52, 51·5, 52 grs.
,,	2179-81 a	,,	'Ālamgir II	21 ?	51·6, 51·3, 51 grs.
,,	2182	,,	,,	..	25 grs.
B.M.C.	900	[Tādpatri]	Farrukh-Siyar	1125	22 grs.
,,	902	Ganjikot	,,	1128-5	22 grs.
I.M.C.	2281-a	,,	'Āligohar	..	43 grs.
B.M.C.	901	Gūti	Farrukh-siyar	1128-5	44 grs.
I.M.C.	1854-5	,,	Muḥammad Shāh	1168 ?	42·5, 42 grs.

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territory not far remote from the borders of the province of Gujarāt and continued after his death by Humāyūn."

It is permissible to argue that the observed dates and surrounding circumstances are at least equally in favour of their ascription to Bahādur Shāh. These coins have never been found anywhere except in Gujarāt and Kāttyāwār and no coin-collector has ever come across them either before or since the publication of Dr. Taylor's article (1920), in any of those territories over which the two first Mughal Emperors held real and permanent sway. Dr. Taylor's specimens were all obtained in Aḥmadābād itself or its vicinity and my own in the town of Junāgadh. Neither Bābur nor his son ever struck copper coins of the first and fourth denominations (wts. 260 and 30 grs.), whereas Bahādur Shāh and indeed, most of the Gujarāt Sulṭāns are known to have done so. (Taylor, J.B.B.R.A.S., 1904, p. 324; Wright, I.M.C., II (Gujarāt) Nos. 65, 66.) Lastly, neither the conqueror nor his son ever cared to put a metrical legend on their issues in silver or even gold and it is exceedingly unlikely that they should have gone out of their way to bestow that honour on the humble and despised *Falūs*. On the other hand, a benedictory legend in verse is the most remarkable feature of the copper issues of Sulṭān Ghiyāsu-d-dīn Muḥammad Shāh of Gujarāt and it is possible that Bahādur Shāh may have followed the example set by his great-grandfather.

But the provenance of coins is, not unfrequently, a very treacherous guide and the other *a prior* arguments are, at best, inconclusive. The decisive solution of the question must depend, as Dr. Taylor himself has pointed out, on the discovery of the place in which the coins were struck. "They do not themselves," he says, "record the mint name, unless, indeed, it be registered in one or more of the reverse margins formed by the sides of the square and the rim. But in none of the specimens hitherto obtained, are these margins legible." (*Loc. cit.* 78.)

I am happy to say that this difficulty has been overcome and that the name of the mint-town can be now read with a reasonable degree of certainty by piecing together the letters visible on the margin of about fifteen of my specimens. The margins are to be read from left to right and from below upwards. And probably with a view to indicate this fact and give a hint to the reader, the die-cutter has deliberately engraved the word in the bottom margin which is 'Shahr' upside down thus: شهر on all the three pieces on which it appears (Plate 2, Nos. 7–9). It is clear from five or six other coins that the right margin reads مكرّم which is written in the same peculiar style of caligraphy, the 'kāf' being formed exactly as in the هركرا on the obverse and the 're' being joined on

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to the 'mim' exactly as in the coins of Mahmūd Begada. (Taylor, Coins of the Gujarāt Salṭanat, J.B.B.R.A.S., 1904, Nos. 31, 33, 34; Plate 2, Nos. 10–14). It is even more easy to see that the top margin contains the word محمّد (Plate 2, Nos. 15–18). It is true that the inscription in the left margin is cut off, but this is hardly material. If the three words above mentioned have been correctly deciphered, the honorific epithet 'Shahr-i-Mukarram' makes it all but certain that the fourth vocable is 'ābād' and that the entire legend is شهر مكرّم محمّد [آباد]. In that case, there can be little doubt that the coins were struck neither by the heroic Bābur nor the reckless Humāyūn, but by the impetuous and unfortunate Bahādur Shāh in his great stronghold of Muḥammadābād-Chāmpāner.

It may be permissible to make a few observations on the true meaning of the 'Bait' inscribed on these coins. Dr. Taylor has said that it "*perhaps* admits of being rendered as follows" and confessed that the rendering appeared to himself to be "doubtful." 'Whoever on the surface of the earth has fame and face, upon his forehead bears the King of India's stamp of grace.' Most people will agree that this is too literal to carry any clear meaning to the mind. It is difficult to understand what is meant by the person of 'fame and face' bearing "the King of India's stamp of grace," unless it be that he owes those possessions to the grace or favour of that ruler. But 'Iqbāl' never means 'grace' or 'favour' and to render it in that way is to sacrifice sense to the exigencies of rhyme and do a violence to the genius and idiom of the language. In these circumstances, I beg to submit another version below:

'Whoever on the surface of the earth possesses honour and prestige lays [keeps or places upon] his forehead the Fortunate Coin [or the Coin of the Good Fortune] of the Sovereign Lord of Hind.'

It seems to me that the signification of the phrase 'Sikka-i-Iqbāl' is very similar to that of the 'Sikka-i-Mubārak' of the mintages of Aurangzeb and his successors.[1] It is the 'Sikka'

---

[1] Whatever the literal meaning of '*Iqbāl*' and of '*Sikka-i-Iqbāl*' may be, its real significance or idiomatic sense is 'King's Coin,' 'King's Money,' *i.e.*, 'Coinage made current by Royal or Imperial authority.' Abul Fazl and other Persian writers repeatedly use the collocation with *Iqbāl* in this way. Cf. '*Mu'askar-i-Iqbāl*,' Camp of Good Fortune, *Āin* I. 27 (Bibl. Ind. Text) and other passages quoted in Num. Sup. XXXIV, pp. 167–170).

Mauqob-i-Iqbāl. Retinue of Good Fortune. *Akb. Nām.* Text, III, 47.
Rāyāt-i-Iqbāl. Standards of Good Fortune. *Ibid.*, III, 7, 33,38.
Āstāneh-i-Iqbāl. Threshold of Good Fortune. *Ibid.*, III, 10, 232, 234.
Lashkar-i-Iqbāl. Army of Good Fortune. *Ibid.*, III, 37.

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or coin struck for marking the culmination of the Good Fortune or as a memento of the auspicious accession of the Emperor or claimant. When the poet says that every person of name and fame places this 'Sikka' on his forehead, he is very probably referring to the Oriental or Pan-Asiatic custom of signifying respect and submission or assent by placing the hand upon the forehead. It is common knowledge that it was the duty of Governors and Viceroys of provinces and even of Ruling Chiefs and Princes to go long distances for escorting ('Istaqbāl') the Royal Farmāns and to place them, after they were delivered by the bearer, on the forehead with profound respect in token of their readiness to obey the Sovereign's wishes and commands. Coins are, as Thomas has justly said, Rescripts or Manifestoes inscribed on metal, of which the object is "to make clear to the comprehension" of the multitude—to the classes as well as the masses—the supremacy *de jure* or *de facto* of the person issuing them. (Chronicles, p. 1). So, the poet hopes and trusts that every person of any position in the country will signify his loyalty to and acknowledgment of the paramount power of Bahādur Shāh by cheerfully accepting as the 'current coin of the Realm' these mintages of his in spite of their novelty and unconventional style.

This is how I understand the lines but the fact of the matter is that 'Sikka' means 'stamp' or 'die' as well as 'coin' or 'money.' If the word is taken in the first of these senses and *Iqbāl* given its correct or dictionary meaning, the idea intended to be conveyed may be that every person of any consequence is the vassal or bond slave of the Shāh of Hind and carries on his forehead the mark, sign or stamp of his condition, as slaves often used to do in ancient times. If 'Sikka' signifies 'coin,' the purport is as I have first suggested.

But a distich having a double meaning is looked upon as a thing of great beauty by all writers on Persian Poetics and it is possible that the composer meant 'Sikka' to be understood in both senses and the legend to be interpreted in either of the two ways indicated. In that case, it may be left to the reader to choose for himself that which appears to him to yield a more rational meaning.

S. H. Hodivālā.

Deolāli,
21*st October*, 1927.

'*Asākir-i-Iqbāl*. Armies of Good Fortune. *Akbarnāma* Text, III, 163.

He even frequently speaks of the 'Akbarnāma' as اقبال نامهٔ این this Book or History of Good Fortune, i.e. this History of the Emperor. (Text, III, 19.)

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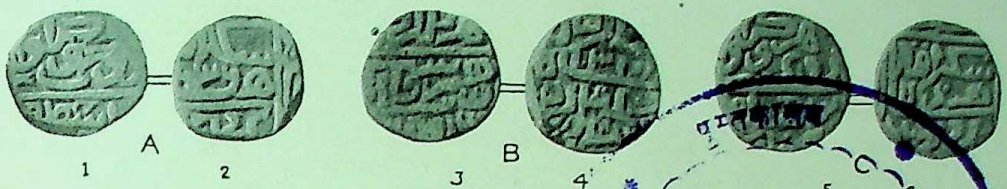

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